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# THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS



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The NARUC Depreciation Report: A Symposium

*Asel R. Colbert, James C. Bonbright and Lester S. Ready*

A Land Economist Looks at City Planning

*Richard U. Ratcliff*

Big Inch Pipe Lines and the Monopoly Competition in the  
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The Technique of Urban Redevelopment: Part 1

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Excess Profits Tax Relief for the Electric Utilities

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DEPARTMENT OF AGRICULTURAL ECONOMICS  
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# THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

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# THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

MAY  
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## The NARUC Depreciation Report: A Symposium A Review of Certain Conclusions

By ASEL R. COLBERT\*

IN 1937 the National Association of Railroad and Utilities Commissioners created a Special Committee on Depreciation. This committee submitted a report at the annual meeting of the association in 1938 and a further report at its annual meeting in 1939.

The committee on depreciation was reconstituted in 1939 and given the status of a standing committee. It has functioned continuously since that time in the preparation of a report on depreciation, which was submitted at the annual meeting of the association held in Chicago in 1943. It deals comprehensively with the entire subject of depreciation, particularly as it applies to public utilities and to problems arising in the treatment of depreciation in regulatory matters.

Under each of the topic headings here-

inafter set forth, certain of the conclusions of the committee are quoted verbatim after which discussion of the specific conclusion is presented.

### *Nature of Depreciation*

"(a) Depreciation is the expiration or consumption, in whole or in part, of the service life, capacity, or utility of property resulting from the action of one or more of the forces operating to bring about the retirement of such property from service;

"(b) The forces so operating include wear and tear, decay, action of the elements, inadequacy, obsolescence, and public requirements;

"(c) Depreciation results in a cost of service."

The report emphasizes the concept of the purchase of capital goods as being in reality the purchase of future services. Under this view, units of utility plant may be considered as stored-up years of service or stored-up work units. Depreciation occurs as the years of service to be real-

\* Chief, Accounts and Finance Department, Wisconsin Public Service Commission; Member, Special Committee on Depreciation, National Association of Railroad and Utilities Commissioners.

ized from the plant expire or the work units to be obtained therefrom are used up, dependent on whether a service life basis or a production basis is used in computing depreciation.

A distinction is drawn between the causes of retirement of property and depreciation itself. Wear and tear are not depreciation; inadequacy and obsolescence are not depreciation. These and other factors cause the ultimate retirement of property but it is the retirement which fixes the end of service life and limits the quantity of production which the plant can yield. Thus, the particular cause for retirement—wear and tear, obsolescence, etc.—is relatively of no consequence. The important fact is the retirement itself. So long as the service which plant can perform during its life is limited, regardless of the cause of limitation, provided it be from a factor considered within the meaning of depreciation, the using up of that service constitutes depreciation.

Depreciation is sometimes referred to as merely a bookkeeping process and the claim is made that the annual depreciation expense recorded in the accounts bears no relation to the depreciation which actually occurred during the accounting period. Accounting Research Bulletin No. 20, issued by the Committee on Accounting Procedure of the American Institute of Accountants says, in part:

"Definitions which imply that 'depreciation for the year' is a measurement, expressed in monetary terms, of the physical deterioration or of the decline in value within the year, or, *indeed of anything that actually occurs within the period are unacceptable.*" (Italics supplied.)

Such views differ substantially from those expressed in the NARUC report. Perhaps the difference may lie, in part at least, in the practices followed by non-regulated enterprises as contrasted with

the significance which must be given depreciation problems in a regulated industry. A non-utility enterprise may charge depreciation primarily with the thought of writing down its capital investment as soon as practicable or of getting depreciation as high as possible for income tax purposes. It is not uncommon in non-utility enterprises to find plant items completely depreciated on the books although they may be in good condition and used in service for some time in the future. Likewise, in nonutility fields the value of the plant and business may depend more on earnings than on any statement of depreciated cost of plant or of reproduction cost new less depreciation. Under these conditions, it is possible that *recorded* depreciation of a nonutility may bear little relation to actual occurrences.

But the situation appears entirely different with a utility whose security structure and earnings are subject to governmental regulation. If the annual depreciation is properly determined (as contrasted with a haphazard or unsystematic procedure of computing depreciation), it constitutes the amount which should be allowed by the regulatory authority as an operating expense in the determination of reasonable rates for utility service. The accumulated amounts of such depreciation immediately reduce the property base to be considered for the purpose of issuing securities. The depreciation reserve requirement likewise has an effect on the rate base, as witness the deduction of the straight-line depreciation reserve requirement in the Hope Natural Gas Company case, which was sustained by the United States Supreme Court on January 3, 1944. In these circumstances depreciation expense and depreciation reserve have a significance far exceeding that of a mere bookkeeping device or an accounting convention.

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*Nature of Depreciation Reserve*

"The depreciation reserve measures that part of the cost of plant still in service which has been written off, usually as an operating expense. If the depreciation reserve has been properly determined, it measures the accrued depreciation. The depreciation reserve should preferably be shown on the asset side of the balance sheet as a deduction from depreciable plant."

In line with the definition of depreciation as the expiration or consumption of service life or production capacity of plant, the report holds that a proper reserve for depreciation reflects the expired or used-up part of service life or production capacity or depreciable plant still in service. In other words, if plant is considered as, in effect, a bundle of services measured either in service-years or in quantity of production, and as these services are expended and a part of the cost of the plant is charged to operations and credited to a reserve for depreciation, the reserve represents that part of the bundle of services which has been used up.

A distinction is drawn between a depreciation reserve and a self-insurance reserve. A self-insurance reserve is merely a segregation of profits and may ordinarily be returned to surplus if the contingency for which it was provided does not occur. The depreciation reserve, however, is directly related to the plant account and measures the amount therein which is deemed to relate to past operations. Thus, the depreciation reserve is not a part of surplus but should really be considered as a deduction from the plant account.

*Base for Depreciation Charges*

"Depreciation expense should be based upon the cost of depreciable assets. The actual cost to a utility of properties acquired as operating units or systems may differ

from their original cost. Under most current systems of accounts for utilities it has been established that depreciation shall be based on original cost.

"Any difference between the cost of plant and its original cost less depreciation is recorded in the utility plant acquisition adjustment account. Since the proper disposition of amounts in this account must depend on the circumstances which gave rise to them, no specific rules for their accounting treatment are recommended."

The report stresses the desirability of computing depreciation expense charges upon the cost of depreciable plant. This view conforms to generally accepted accounting principles and probably would not have required any particular discussion in the report had it not been for the doctrine set forth in the United Railways case<sup>1</sup> that depreciation expense should be based on fair value. However, in the recent Hope Natural Gas Company case decided by the United States Supreme Court on January 3, 1944, that court approved the computation of depreciation on the basis of cost and expressly disapproved the rule established in the West case. Thus, the law now appears definite that depreciation expense for rate-making purposes should be based on cost of plant. This accords with long-established accounting practice.

At the present time, systems of accounts prescribed by regulatory authorities for electric, gas, water, and telephone utilities provide that utility plant shall be stated at original cost, the term being defined as the cost to the person first devoting the property to utility use. Thus, original cost is synonymous with cost for all property constructed by the utility. However, as applied to property acquired from predecessor utilities, the cost to the present owner may differ (usually great-

<sup>1</sup> *United Railways Electric Co. v. West*, 280 U.S. 234, 253.

er) from the original cost. This difference is recorded in a separate account termed "utility plant acquisition adjustments."

The report states no general principle which should govern the disposition of the utility plant acquisition adjustment. It simply refers to the provisions of the system of accounts which provide that the account "shall be depreciated, amortized, or otherwise disposed of as the Commission may approve or direct," thereby recognizing that the account may be subject to depreciation or amortization charges. However, no specific rules are provided in the accounting systems and the committee concludes that this is a wise procedure because the proper disposition of the adjustment account must depend on the circumstances which gave rise to it.

The writer believes that a more definite position might properly have been taken in this respect. Amounts in the acquisition adjustments account which are definitely shown to comprise a part of the cost to the company of depreciable plant appear to be subject to charges for depreciation just as the original cost of the plant is subject to such charges. Only by taking the sum of both the original cost of depreciable plant, as that term is defined, and the difference between the cost to the company and such original cost is the complete cost of depreciable property ascertained. Therefore, if the full and complete cost of depreciation of property is to be recorded in the accounts, any amounts in the utility plant acquisition adjustments found to comprise a part of the cost of depreciable plant should likewise be subject to charges for depreciation or amortization.

#### *Methods of Computing Depreciation*

"The straight-line method is generally recommended for public utility accounting and financial purposes and also for the com-

putation of both depreciation expense and accrued depreciation for purposes of rate making."

The report explains various methods of computing depreciation expense but concludes that the straight-line, the compound-interest, and the sinking-fund methods are the only ones which are being used to any great extent in connection with utility plant. The production method, although appropriate for natural gas utilities, is not used generally by utilities because of the difficulty of making production estimates. Hence, the decision as to the preferable depreciation accounting method rests substantially on comparison of the straight-line and the interest methods, each of which is an allocation of depreciation on a service-life basis.

The report lists several reasons for favoring the straight-line method. The simplicity of the straight-line method is stressed, it being pointed out that the calculation of correct sinking-fund annuity rates for property accounts composed of a large number of units is an involved mathematical process. Further: where depreciation calculations involve compound interest, greater attention must be given to all details in order to assure the same degree of accuracy as would be obtainable with the straight-line method because each dollar charged or credited to depreciation reserve under the interest methods has the effect not merely of one dollar but also of all subsequent interest accruals on reserve balances.

The straight-line method is stated to be more conservative in its effect on future operations and on security structures. It results in building up a depreciation reserve more rapidly in the early years than the interest methods and thus its use involves a lesser future risk. It is explained that the interest methods have the effect of postponing the heaviest depreciation ac-

cumulations to the later-years' life of property when maintenance expenses may be higher and operating income reduced because of the grade of service rendered by the old plant.

Attention is directed to the fact that use of the straight-line method tends to reduce the amount of securities outstanding as compared with the interest methods. Generally, funds held in the business by depreciation accruals have been invested by utilities in additional property. Therefore, since straight-line reserves build up more rapidly initially, there will be less outside financing necessary. Hence, the report makes the general observation that when straight-line depreciation accounting is followed, the ratio of outstanding securities to plant is lower than where interest methods are used.

The straight-line method is less seriously affected by inaccuracies in estimates. This is because with the interest methods the effect of any inaccuracy in estimates is compounded and in long-lived plant may be serious. It is pointed out that with a 75-year life the 6 per cent sinking-fund rate is .07686 per cent and that in 50 years the accumulated depreciation reserve would be 22.3 per cent, leaving about 78 per cent of the cost of depreciation to the last one-third of the estimated life, which is the most uncertain part of the estimate. Further, in the example given only about 6 per cent of the total depreciation reserve would be comprised of the annuities, leaving 94 per cent to be accumulated by interest additions. Under these conditions, it is stated that any slight deviation from the original estimated life either in the mortality characteristics of the plant, in salvage, or in the rate of interest, would throw the results under the interest methods seriously awry.

The straight-line method is in almost

universal use. Granting that such use does not prove it the best the report concludes that when business managements throughout the country, free to adopt any reasonable method, have generally used the straight-line method, such general acceptance is entitled to great weight in considering its merits.

It is granted that there are special purposes for which the interest methods are practicable and desirable, such as in the comparison of alternative ways of developing or constructing a project. Here it is more practicable to weigh the depreciation and interest costs of alternative processes by the sinking-fund method because an undepreciated investment base can be used in the comparison. Likewise, in a rate proceeding where findings as to accrued depreciation are difficult or impossible because of lack of data, the sinking-fund method may be used provided the interest rate is the same as the allowed rate of return.

The committee concludes that:

"From the above consideration of the theories upon which the several methods are based and observation of their results in practice, it is concluded that the straight-line method is reasonable, equitable, and generally preferable for accounting, financial, and regulatory purposes, although it is recognized that in some situations the use of other methods may be justified."

#### *Adjustment of Depreciation Rates and Reserves*

"Current charges for depreciation expense should be based upon the best possible estimates of the amount properly applicable to the period covered by an income statement without modification for excessive or deficient charges in the past.

"In principle, any necessary correction of depreciation reserves should be made through surplus or a special section of the income account. However, the adjustment of inadequate reserves, while sound in

theory, presents many practical difficulties. Where such deficiencies are serious, it is desirable to make every effort to adjust them, although it is recognized that the application of a uniform rule without regard to what is equitable and feasible under the circumstances of individual cases might cause injury to security holders out of proportion to the long-range benefits. Therefore, it is concluded that the objective of correcting inadequate reserves should be approached with appropriate consideration of the practical effects of alternative courses of action."

In former years the electric, gas and water utilities generally followed the retirement reserve method of accounting for property retirements, which method was generally permitted by systems of accounts prescribed by regulatory authorities. In accordance with present accounting regulations generally prescribed, these utilities are now required to use depreciation accounting. However, due to the former practice, the reserves accumulated by utilities are lower in many instances than full depreciation reserve requirements.

In discussing the problem of adjusting depreciation reserves, the report adopts the principle that any adjustments should be made through surplus or a special section of the income statement. The report states:

"Income statements are designed to show, as nearly as practicable, the correct results of the operation of the business for a definite period. Balance sheets are designed to show the financial condition of the company at a given date. Bearing in mind the purposes of such statements and the effect of depreciation accounting on them, in principle it appears that current charges for depreciation expense should be based upon the best estimates of the amount properly assignable to the period covered by the income statement, without recognition of excessive or deficient depreciation charges in the past. The concomitant of this principle is that any necessary correction of deprecia-

tion reserves should be made through surplus or a special section of the income statement."

However, the committee recognized practical difficulties of making adjustments of reserves, stating:

"It is recognized that application of a uniform rule, without regard to what is equitable and feasible under all the circumstances of the individual case, might cause injury to security holders out of proportion to the long-range benefits desired. Therefore, it is concluded that the objective of correcting inadequate reserves should be approached with appropriate consideration of the practical effects which may result from alternative courses of action.

"In the absence of serious deficiencies, retroactive application of depreciation principles should be unnecessary since continuation of proper depreciation accounting in the future, coupled with the growth of the industry, will, in many instances, tend to minimize the significance of initial reserve deficiencies."

As a member of the depreciation committee, the writer knows that great concern has been evidenced by utility interests of a retroactive application of depreciation accounting. They apparently fear some mandatory requirement for immediate establishment of full depreciation reserve requirements regardless of the adverse effect on surplus.

It seems to me that any general requirement for retroactive application of depreciation is unnecessary and should not be required. This is the plain import of the committee's report. There may and probably will be extreme instances where reserves are seriously deficient and some special action is necessary in connection with refinancing or in reorganizations. But no requirement for general retroactive depreciation accounting is recommended by the committee; and in the opinion of the writer, no such require-

ment is likely to be required by regulatory commissions.

There is good reason to believe that if proper depreciation accounting is followed for the future, the reserves of utilities will increase substantially and that any initial deficiency will become increasingly of less importance. Evidence that this is so is already available. Financial statistics released by the Federal Power Commission show that reserves for depreciation of utility plant increased from 10.8 per cent of plant in 1937 to 15.5 per cent in 1942. These percentages are based on total plant figures and would be higher if nondepreciable items were excluded. In Wisconsin the reserves of class A electric utilities increased from 18.9 per cent of depreciable electric plant in 1937 to 24.1 per cent in 1942 and will be about 25 per cent or a little more by the end of 1943. With such trends, it seems certain that general retroactive increases in reserves should be unnecessary and should not be required.

The problem of any adjustment of reserves must be considered with respect to the circumstances affecting each particular instance. The degree of reserve deficiency is an important factor along with the probability of reasonable correction of the situation in the future without a "major operation." A few specific instances will illustrate how the matter has been handled in Wisconsin.

A few years ago a Wisconsin electric utility had a depreciation reserve with a debit balance—in other words, less than nothing. In addition, there were a number of inflationary items in plant which should have been written off. Here was a case where a "major operation" was necessary to correct the situation. This was done by requiring the establishment of a reserve equal to 20 per cent of plant to be established out of all available earn-

ed surplus and capital surplus created by reduction of an outstanding open account due to the parent company.

As contrasted with that situation, there have been a number of utilities whose reserves were definitely on the low side of full reserve requirements. No requirement other than to account for the full current depreciation expense has been imposed, however, and the reserves of such utilities have improved substantially. Theoretically, any deficiency will not be made good by accruing only current depreciation but the continued growth of the business and the increase in depreciation reserve tend to minimize any deficiency which may now exist. When it is considered that the reserves of all Wisconsin class A electric utilities, including some utilities with reserves on the low side, are equal to 25 per cent of depreciable electric plant, it seems apparent that general retroactive application of depreciation accounting has been proved to be unnecessary in Wisconsin.

The report adopts the view that if any corrections of reserve are necessary, they should be made through surplus. In other words, reserve deficiencies or excesses should not be permitted to influence the current depreciation expense, although it is admitted that minor corrections may be made through the current charge if the income statement is not materially distorted thereby.

It seems proper that this procedure should be followed. The annual income statements of utilities should reflect, as nearly as is practicable, the actual results of operations for the year if they are to fulfill regulatory purposes satisfactorily. If operating income were permitted to be influenced in a material way by events which happened in the past, then it is questionable if much recognition could be given to it in a rate proceeding.

The combined return and depreciation allowed by regulatory authority may be viewed as a return *of* capital and a return *on* capital. If past returns *on* capital were deficient or excessive, that fact should not be used to increase the present allowable return to a level unreasonably high or to reduce it to a confiscatory level. Similarly, it is at least extremely doubtful if past excessive or deficient returns *of* capital can be employed to decrease or to increase the return *of* capital presently indicated as properly includable in expenses.

However, in the opinion of the writer, the nature of depreciation accounting affords a practicable solution of the problem of adjusting reserves. The proper annual charge cannot be determined precisely. Depreciation studies may indicate, however, that the proper annual amount lies within a zone of reasonableness. For example, studies may indicate that the service life of the property is from 30 to 35 years. If the reserve were deficient it would seem proper to adopt the higher rate of depreciation indicated by the lower range of service life—and conversely if the reserve were known to be on the high side. It is believed that the degree of reasonable flexibility which is inherent in depreciation estimates is all the adjustment of current charges which is warranted and all that will be necessary in the great majority of cases. But to go beyond the range of a reasonable estimate of the current depreciation expense and deliberately increase or decrease the current charge in order to correct past deficiencies or excesses might result in current income statements being materially affected and their use for regulatory purposes impaired.

#### *Depreciation in Rate Cases*

"In fixing public utility rates adequate depreciation expense should be allowed ac-

cording to the service life basis and, in principle, the reserve requirement determined on the same basis should be deducted in determining the rate base. There are cases, however, where equity requires the deduction of the book depreciation reserve, even though it differs materially from the reserve requirement. The determination as to when this condition exists involves, among other things, consideration of the history of regulatory requirements in the jurisdiction and the experience and practices of the company. In other words, individual situations should be dealt with by the Commission having jurisdiction in accordance with the facts in each case."

"The sinking-fund method may sometimes be used in rate making where it is impracticable to determine the accrued depreciation. When the sinking-fund method is used in rate proceedings, the interest rate employed should be the same as the rate of return which is applied to the undepreciated rate base."

The report stresses the need for a consistent application of depreciation principles in the rate-making process. If plant depreciates for the purpose of the annual charge to be included in operating expenses, it depreciates likewise for the purpose of the accrued depreciation to be deducted from the rate base.

This consistency of treatment is apparent in the recommendation that depreciation expense computed on the basis of the service life plant should be allowed in operating expenses and the accrued depreciation determined on the same basis should be deducted in computing a rate base. In other words, using an over-simplified illustration, if plant has a service life of 25 years and has attained an age of 5 years, the allowable operating expense charge should be 4 per cent of the cost of plant and the accrued depreciation to be deducted should be 20 per cent.

Recent decisions of the United States Supreme Court point toward a consistent treatment of depreciation as the only

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equitable way to handle the problem in a rate case. In the Lindheimer case<sup>2</sup> the inconsistency between the large depreciation reserve and the claim for annual depreciation expense, and the company's admission of a small amount of accrued depreciation, was so marked as to destroy any basis for holding that the rates in suit would produce confiscation.

Again in the Natural Gas Pipeline Co. case<sup>3</sup> the court sustained an order of the Federal Power Commission in which the sinking-fund method of computing depreciation expense had been used with a 6½ per cent interest rate, which was the same as the allowed rate of return. Likewise, in the Hope case<sup>4</sup> the court sustained an order of the Federal Power Commission reducing rates in which the depreciation expense had been allowed on the straight-line basis and the straight-line depreciation reserve requirement had been deducted in computing the rate base.

Consistency between annual allowances for depreciation and accrued depreciation is a sound principle for use in the rate-making process. In practice, however, this principle may have to be tempered in the interest of equity in view of the past history of actual regulatory procedure. Formerly, the retirement reserve method was generally permitted by regulatory authorities. Many utilities availed themselves of this option and set up retirement expense and reserves at a level much lower than full depreciation provisions. The result is that at the present time some utilities have reserves which are less than the depreciation reserve requirement.

Further, regulatory procedure in the past regarding depreciation has not been uniform. Some commissions have allowed only retirement expense in operating expenses for rate purposes; others have allowed full depreciation expense even in instances where retirement expense only was recorded in the accounts. It is believed that situations of this nature were in the minds of the committee when it recommended that in certain instances "equity requires the deduction of the book depreciation reserve, even though it differs materially from the reserve requirement" and that "individual situations should be dealt with by the Commission having jurisdiction in accordance with the facts in each case."

#### Conclusion

The writer has been a member of the NARUC Depreciation Committee since its inception in 1937 and has participated actively in the work of preparing the report. In these circumstances it is difficult to assume a completely disinterested attitude in appraising the worth of the document. However, viewing the report objectively, it is the opinion of the writer that it is worthy of careful study by all interested in regulatory matters. It will no doubt lend impetus to the movement already well under way for depreciation accounting by all utilities. Likewise, it should assist materially in bringing into general application a consistent treatment of depreciation in rate cases so that in the future there will probably be a greater tendency toward the use of depreciation as recorded in the accounts for purposes of both the annual expense and the deduction of accrued depreciation in rate base determinations.

<sup>2</sup> *Lindheimer v. Illinois Bell Telephone Co.*, 292 U.S. 151.

<sup>3</sup> *Federal Power Commission v. Natural Gas Pipeline Co.*, 315 U.S. 575.

<sup>4</sup> *Federal Power Commission v. Hope Natural Gas Co.*, decided by U.S. Supreme Court, January 3, 1944.

## The Depreciation Reserve as a Measure of Actual Accrued Depreciation

By JAMES C. BONBRIGHT\*

IT is a temptation, to which I am yielding, to begin these comments on the notable report of the Depreciation Committee by asserting that it reaches the right conclusions for the wrong reasons. By "the right conclusions" I mean the vigorous support which the committee gives to straight-line depreciation accounting as applied to most utility companies. By "the wrong reasons" I refer, not to *all* the arguments that the report urges in support of straight-line accounting—most of which arguments seem to me quite sound—but rather to the primary contention that a straight-line reserve can be expected to measure "with reasonable accuracy" the actual depreciation of the physical properties of a utility company.

This particular claim of virtue for straight-line accounting is one that, in my opinion, cannot fairly be made for any accounting device whatsoever. Nor is it a claim that need be sustained in order to save the practical validity of the straight-line method.

The relationship between depreciation as an accounting category and "actual depreciation" as an objective phenomenon cannot be discussed intelligently without reference to a fairly precise definition of "actual depreciation". Yet all attempts hitherto made to secure a satisfactory definition have ended in partial failure. The force of this statement will be apparent from a review of competing definitions.

In general accounting theory, "depreciation" has usually been defined in terms of a fall in the value of a fixed asset due to those economic and physical forces that lead to ultimate retirement. Even in the

field of unregulated business enterprise this attempt to distinguish between certain changes in the value of an asset which constitute "depreciation" and certain other changes which are to be disregarded gives rise to serious difficulties.

With a regulated public utility, however, there is a further objection to any identification of depreciation with loss of value. This objection is the very one that is usually conceded to be fatal to the acceptance of "value of the property" as a rate base—namely, the vicious-circle situation. The question whether and to what extent an old and obsolescent asset has fallen in value to the public utility which owns this asset can be answered only after a commission or court has decided how much, if any, depreciation to deduct for rate-making purposes. If this decision should support the company's contention that depreciation should be ignored, it would tend to make the asset worth to the company as much as a new asset.

Aware of this basic objection to "value" as a category of public utility rate-making and accounting, some writers have defined depreciation in terms of cost rather than in terms of value. Thus, some of them have accepted P. D. Leake's statement that depreciation means "expired capital outlay"—a definition quoted by the NARUC Committee with qualified approval. Strictly analyzed, however, Leake's definition makes nonsense. If a capital outlay can be said to expire at all, the expiration takes place at the time when this outlay is made rather than during the later period between the date of acquisition of the asset and the date of its ultimate retirement.

A third type of definition eschews not

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only value but also cost as the thing which is supposed to diminish during the life of the asset and identifies depreciation either with loss of service life or else with loss of service capacity. Thus, according to the first version of this third type of definition, if a telephone pole has already been in service for one half of its useful life, it has depreciated precisely 50 per cent by very definition. But according to the second version, if the pole—during the expired half of its service life—has already lost 60 per cent of its capacity to perform the service of transmitting electric currents, it has depreciated precisely 60 per cent also by very definition.

This third approach to a definition, which associates depreciation as far as possible with physical units rather than with economic concepts, has much in its favor as applied to certain limited types of assets. When offered, however, as a basic definition for utility properties in general, it has serious deficiencies. One of these deficiencies is that neither lapsed service life nor lapsed capacity to perform useful service takes account of the loss of efficiency of the asset that characteristically begins to take place long before retirement date.

The above three major ways of defining "actual depreciation," each of which is subject to many variations, would seem to exhaust the possibilities. Yet, as already noted formidable objections can be raised against all of them, especially when applied to the complex plant and equipment of a regulated public utility.

Some writers have therefore abandoned the attempt to secure a precise definition of "actual depreciation" and have even suggested a doubt whether the term is a scientifically valid concept. Other writers have reverted to a definition of depreciation in terms of loss of value but have

tried to avoid the vicious-circle objection by construing "value" to mean, not what the asset is worth to the corporation as a source of profits, but rather what the asset is worth to the community as a source of public utility service. This latter conception of "value to the community" as a category of public utility accounting and rate-making has possibilities which need to be developed in the literature of the future. But the concept does not lend itself readily to measurement in terms of dollar amount.

The NARUC report appears to recognize some if not all of the above-mentioned difficulties of defining "actual depreciation." Being written by a large committee rather than by a single individual, the report tries to meet the problem by an eclectic definition which accepts at least three inconsistent concepts. Thus we read:

"Depreciation is the expiration or consumption, in whole or in part, of the service life, capacity, or utility of property resulting from the action of one or more of the forces operating to bring about the retirement of such property from service."

This sentence leaves the reader uninstructed as to how he should measure the depreciation of a physical asset if he finds that this asset has already lost 50 per cent of its service life, 70 per cent of its capacity, and 85 per cent of its utility (whatever this last, undefined word may mean).

For the reasons suggested in the preceding paragraphs, I believe that a final judgment on the precise relationship between an appropriate accounting allowance for depreciation on the one hand, and so-called "actual depreciation" on the other hand, must await a more satisfactory answer than we now have to the prior question: What is the meaning of "actual

depreciation?" At the present time I am doubtful whether it will be possible to reach an agreed-upon definition sufficiently precise so that the term will lend itself to scientific quantitative measurement. Meanwhile it seems to me that the practical arguments in favor of straight-line depreciation accounting, some though not

all of which have been set forth in the NARUC report, are so strong that they justify the general adoption of this form of accounting quite without reference to the question whether or not a straight-line reserve can be said to measure "actual depreciation" with "reasonable accuracy."

## The Unsoundness of Recommendation Forty-Two

By LESTER S. READY\*

**T**HIS report of the Committee on Depreciation of the NARUC is a real contribution to the subject of depreciation accounting for public utilities and the handling of depreciation accounting in connection with rate proceedings. The various definitions and issues are brought out in clear perspective so that discussion can be limited to those issues in dispute. In general, most of the conclusions and recommendations appear sound and should be acceptable to the various interested parties if applied intelligently, consistently and with sound reasoning.

The report deals almost exclusively with depreciation accounting, the questions pertaining thereto, and its application to rate proceedings. The subject of accrued depreciation in connection with valuation of properties for sale or in condemnation proceedings is not covered. The introductory statement might well have specified that the discussions and conclusions refer to depreciation accounting and its application to rate regulation and are not directed to valuation for sale and condemnation proceedings, although the matter of accounting would have some bearing on such proceedings.

### *Objective of Depreciation Accounting*

It appears that there is little difference of opinion as to the objective of depreciation accounting—the process of charging to operations the book cost of depreciable property over its life. There is a question, however, as to how the amount of the book cost shall be apportioned to the accounting periods within that life.

The Interstate Commerce Commission Docket No. 14700 (Decided: July 28, 1931), prescribing the basis of depreciation charges for telephone utilities and steam railroads, defined depreciation as:

"... depreciation is the loss in service value not restored by current maintenance and incurred in connection with the consumption or prospective retirement of property in the course of service from causes against which the carrier is not protected by insurance, which are known to be in current operation, and whose effect can be forecast with a reasonable approach to accuracy." (p. 422)

The System of Accounts of the Federal Power Commission (approved June 16, 1936, effective January 1, 1937) defines depreciation as follows:

"Depreciation", as applied to depreciable electric plant, means the loss in service value

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not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities." (Definition No. 13)

The above definitions are in general agreement and, for the sake of brevity, "loss in service value" may be accepted as the definition of depreciation.

The following definition (taken from the Federal Power Commission's System of Accounts) is also of importance:

No. 38—"Service Value" means the difference between *original cost* and *net salvage value* of electric plant."

The real purpose of depreciation accounting is to make provision for the loss in service value—using up of investment—during the life of the property. The spreading of this loss to the respective accounting periods making up the service life has been the subject of much discussion and there is a wide difference of opinion as to which method should be employed.

The following quotations from the summary of the report of the Committee on Depreciation indicate that the aim is to account for the depreciation as it accrues:

"5. Depreciation accounting is the process of charging the book cost of depreciable property to operations over its life.

"12. The depreciation reserve measures that part of the cost of plant still in service which has been written off usually as an operating expense. If the depreciation reserve has been properly determined, it measures the accrued depreciation.

"14. The financing of replacements is not the purpose of depreciation accounting. Its purpose is to record as a cost of operations

the pro tanto cost of property consumed therein, thus maintaining the integrity of the investment whether or not replacement occurs.

"29. *Current charges for depreciation expense should be based upon the best possible estimates of the amount properly applicable to the period covered by an income statement*, without modification for excessive or deficient charges in the past.

"39. *A properly computed depreciation reserve is the best measure of accrued or existing depreciation*, since such reserve reflects that part of the cost of the property in service which relates to the exhausted or expired economic or service life."

The Uniform System of Accounts of the Federal Power Commission (under Item 10, Instructions General Depreciation Accounting, page 11) provides that: "*Each utility shall record as at the end of each month the estimated amount of depreciation accrued during that month on depreciable electric plant.*"

Unquestionably, the object of depreciation accounting is to record and provide for the accruing loss in service value from month to month or year to year. As indicated in the report on depreciation by the Interstate Commerce Commission, the accrued depreciation reserve as of a given date should represent insofar as possible the accrued loss in service value up to that date. This should be the aim of every method of accounting.

The formula that will spread over the accounting periods the total loss in service value which is most nearly in accordance with the accruing depreciation should be the one used regardless of whether it is the "straight line" formula or the one referred to as "compound interest or sinking fund" formula.

#### *Basis or Formula to be Used*

The method which most accurately measures accrued depreciation of electric

utility property lies between the extremes of (a) the sinking fund formula using an interest rate equal to the fair return and (b) the straight line formula.

The conclusion and recommendation No. 42, set forth in the report and copied below is unjustified.

"42. The sinking-fund method may sometimes be used in rate making when it is impracticable to determine the accrued depreciation. When the sinking-fund method is used in rate proceedings, the interest rate employed should be the same as the rate of return which is applied to the undepreciated rate base."

In this conclusion and recommendation the Committee indicates the choice between two extremes: (1) the straight line formula and (2) the sinking fund formula with the interest rate equal to the fair return. It is doubtful whether either extreme fulfills the object of accruing reserve at the same rate as that of the accruing depreciation.

Those who support the straight line method of depreciation accounting contend that it is simple and that the sinking fund formula is somewhat complicated in application. These contentions may largely be ascribed to lack of experience in practical applications of the sinking fund method. Wide experience in the handling of depreciation from a regulatory standpoint and from an engineering consideration of accounting leads to the inescapable conclusion that the sinking fund method practically applied is not complicated and has certain definite advantages over the straight line method when the whole question of utility accounting and regulation is considered.

The service lives of units of property and their service values (cost less salvage value) are constants, regardless of the formula used. Both methods require application of annuity rates based on service

lives of property units. In using the straight line formula, the basis for the annuity rate may be determined by computing the weighted average of the estimated lives for the various units of property. Under the sinking fund formula, it is necessary to apply annuity rates to the separate, estimated lives and compute therefrom the average annuity rate so as to insure against error when considering properties in which fairly wide variations occur in individual lives of units in one accounting classification. This is a matter of engineering analysis and estimate and, once completed, does not affect accounting processes.

In a practical accounting for depreciation, average annuity rates are determined for each of the different classifications of property and applied to the capital by classes of accounts to determine the credit to reserve. The reserve or total accrued depreciation is either kept in one main account for balance sheet purposes or subdivided into major groups; for example, hydro production, internal combustion production, steam production, transmission, distribution, and general, as required for analysis by the Federal Power Commission's System of Accounts. The annuity is credited to reserve under both the sinking fund method and the straight line method. Under the first-named method, interest on the balance in the reserve at the interest rate determined must also be credited to the reserve.

Debits to reserve upon retirement of units of property are the same under either the sinking fund or the straight line formula. Certain units are retired before expiration of the estimated life on which annuity has been computed; others, after longer life. Mathematically, the portion of the reserve assignable for individual units retired prior to average life is less than the service value represented by the

cost new less net salvage value under either formula. Under practical accounting procedure, the reserve is debited with the entire loss in service value experienced.

Under the sinking fund formula, interest on reserve applies to the total reserve accrued to date. It is not necessary to make computations of interest for the various accounting classifications and individual units. For purposes of control and in order to check the correctness of the depreciation allowance on either straight line or sinking fund basis, it is often advisable to set up an analysis of accrued depreciation by main accounts so that where results indicate that either too much or too little depreciation is being accrued, adjustment can be made in future annuity rates. Generally, this is a special study and should not demand exactness of accounting since its object is to determine reasonableness of estimates.

It is contended by those who favor it that straight line depreciation approximates the net result of the combination of various elements of time, interest, physical depreciation, increasing operating costs, and other influences which affect service value.

The straight line method may produce results that are by chance approximately correct for a composite property like a telephone system, or the particular equipment and structures for which depreciation is accrued in railroad system accounting, but it may be seriously in error when applied to a property consisting of long-lived units with maintenance costs having only slight variations throughout the lives of the units and where interest (cost of money) is one of the major factors in the service value which is apportioned to the respective accounting periods.

Depreciation, as defined and as applied to the cost of an installed unit, deals with

spread of "cost less net salvage" (service value) over the service life of that unit. The depreciation allowances by accounting periods are intended to represent this service value as it is used up or consumed. Accordingly, the periodic allowance should be the amount which most nearly measures or reflects the depreciation or loss in service value occurring during that period so that as of any date the accrued reserve will represent closely the accumulated loss in service value in the property.

The important questions are: At what rate is the service value used up with the elapse of time? Is it at a uniform rate or at a varying rate? Can it be approximated by some mathematic formula?

Normally, in buying such commodities as coal and oil the payment involved is for a quantity sufficient for operations over a few months, or a year or two at most. Consequently, the item of interest is generally insignificant. However, if the goods are for use over as long a period as, for instance, 10 or 15 years, it would be uneconomical to pay at the present time the full price per unit for goods to be used 10 years hence. A wise purchaser would discount the price for the later years at least to the extent of interest on the purchase price during the period between dates of purchase and use.

For properties having short lives of 5 to 10 years, where operating costs increase with age, the accruing loss in service may perchance closely approximate the results obtained by applying the straight line method. Depreciation on some units of property may accrue more rapidly than is indicated by the straight line formula, owing to the dominance of increased maintenance and reduced dependability. For longer-lived properties, where operating costs are fairly constant and not materially increased with the passage of time, interest is the more predominant factor

and as a result the accrual of depreciation more closely follows the sinking fund formula than the straight line formula.

If—for a given unit or groups of units—the operating costs did not increase actually or relatively with the passage of time and the service dependability did not change, and furthermore, if the depreciation reserves could immediately be invested in property, then the interest rate to be used in computing sinking fund depreciation might reasonably be the same as the fair return on money invested in the property. However, in the absence of such ideal conditions and in order to reflect the accruing depreciation actually occurring, it is necessary to adopt an interest rate which is lower than the fair return and often lower than cost of money obtained from the first mortgage sources.

Some of the reasons for this are: (1) improbability of being able to use immediately reserve for additions and betterments to property or for retirement of bonds; (2) likelihood and extent of increased operating expenses as time passes; (3) possibility and effect of partial obsolescence not sufficiently great to justify retirement; and (4) impairment of the dependability of service as the age of the unit increases.

Credits to the depreciation reserve normally are made monthly. The moneys are first reflected in the balancing entry to cash in current assets. Where gross additions and betterments are made uniformly and the costs thereof exceed the credits to the reserve, these moneys are quickly transferred to investments in earning properties. However, when fixed capital requirements fall below the amount credited to depreciation reserve or when expenditures for additions and betterments are intermittent, the assets in cash build up to an amount in excess of the operative working capital reasonably required. Con-

sequently, the earnings on this portion of the reserve may be limited to interest on bank deposits.

With the lapse of time there is a tendency toward increased maintenance costs of utility property; e.g., automobiles and other machines. With respect to hydroelectric production facilities, however, this increase is relatively small. In other classes of property the increase varies from practically zero to possibly as much as 2% or 3% per annum. As a result, the service value of the properties is reduced to a greater extent than is measured by the use of a sinking fund formula in which the interest rate is equivalent to fair return or average cost of money. For example: assume a class of property on which the maintenance and operating costs increase from 2% of fixed capital per annum for the first year of operation to 3½% per annum at the end of the fifteenth year of a 20-year estimated life. Using a sinking fund rate equal to the fair return (say 6%), the annual cost of use of the property when 15 years old would be 1½% more than at the time the property was new.

Obsolescence may tend to cause a reduction in service value at a somewhat higher rate than is indicated by the application of the sinking fund formula with interest equal to fair return. Property becomes partially obsolete, resulting in costs that are higher than those of a new property but not sufficient to justify replacement. The general effect on service value is the same as if increased operating costs had occurred.

The use of the sinking fund formula with an interest rate below fair return or average cost of money tends to compensate for loss in service value brought about by increased operating costs resulting from age or from partial obsolescence.

In the case of hydroelectric facilities,

the potentialities for increased operating costs with age are relatively minor. Obsolescence may occur to a certain extent, due generally to improvement in the art of developing power from other than hydroelectric sources. Dependability of service does not materially change with age under reasonable operating conditions. The ability to reinvest accrued depreciation reserve money is limited in the main to minor additions of property and to retirement of bonds. Estimated lives of property units are relatively long. Under these circumstances, the method of accounting for depreciation which would most logically measure the accruing loss in service value with passage of time would be either a sinking fund or a compound interest formula with an interest rate somewhat less than the reasonable cost of bond money but in excess of zero interest rate—straight line formula.

In the final analysis, the interest rate used must be a judgment figure based on a general consideration of all factors, the intention being to distribute over the life

of the property the loss in service value as it occurs year by year.

With reference to depreciable properties—such as those of gas and electric utilities—having comparatively long lives, the application of the straight line formula results in accruing depreciation reserve at a faster rate than that of the depreciation actually taking place; whereas the application of the sinking fund or compound interest formula, with interest rate equal to fair return, results in accruing depreciation reserve at a slower rate than that of the depreciation actually taking place.

Consequently, the conclusion and recommendation of the committee—that either the straight line formula or the sinking fund formula, with the fair rate of return as the interest rate, be used—propose the use of one of two extremes neither of which is correct. The aim should be to apply the particular formula which meets the requirements of sound and mathematically correct depreciation accounting and this should contemplate a basis lying somewhere between these extremes.

## A Land Economist Looks at City Planning

By RICHARD U. RATCLIFF\*

IT may be said that this piece was conceived in jealousy and born of animus. Circumstantial evidence is against me for my thesis is that the members of my profession are possessed of a better background for the conduct of city planning operations than are architects and engineers. Let me earnestly assure you that my objective is not to discredit those architects and engineers who have seen the need for planning and have wholeheartedly undertaken to do something about it, but rather to shame social scientists into awakening to their responsibilities in the planning field and to encourage the planning fraternity to return to fundamentals. In briefest form the argument is simply that social considerations are more important in planning than are engineering considerations and hence that social scientists must play a larger part in the process than technicians. The argument may be presented in a progression of propositions:

1. *The city is an economic and social mechanism.* The explanation of the urban organization of society is found in the socio-economic activities of man which require the concentration of people, buildings, and machines within relatively small areas. Thus the demand for urban land arises from the need for space for the performance of these activities. The economic, social, and technical forces which impinge upon each urban area determine its economic and social characteristics and

its rate of growth. In a sense, cities have developed as integral parts of the national productive and distributive machinery. The spatial pattern of functional areas within the city, the street system, the buildings which crowd the landscape together with the people who inhabit and use them, constitute essential items of economic equipment.

From the sociological viewpoint, cities are settlements of individuals living together in complicated economic and social contact. The social characteristics of city dwellers and their way of living do condition the demand for the services of urban land and have a direct influence on the pattern of land use, on land value, tenure, and the type and design of buildings. To understand these influences we must know something of urban population trends, of age and sex distribution, of racial background, of geographical origins. We must know something of social changes which may alter urban behavior patterns and affect the demand for the services of land.

2. *The physical form and ecology of the city are the products of the forces of demand and supply operating within the framework of the real estate market and conditioned by economic, social, and legal institutions.* The pattern of land use in urban areas is not a matter of accident. There is an essential order in the urban structure. It is true that our cities have not had the benefit of the same skilled planning which has produced highly efficient machines and factories. But, while this lack of control and absence of conscious design have given rise to many in-

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efficiencies in the operation of cities as part of the productive and distributive machinery, it remains that the basic urban form is essentially functional. It can be demonstrated that the spatial distribution of the various land uses has evolved from the functions to be performed through a process of competition for preferential locations among the uses in the real estate market.

3. *The institutional framework of the market and the socio-economic forces operating within it can be controlled or modified only slowly and with great difficulty.* If the future structure of the city is to be fitted into a pre-determined or "planned" pattern which is at variance with that pattern which would otherwise eventuate, social controls must be applied to certain market forces or modifications must be made in the institutional framework within which the market operates. Such artificially-induced change will meet with strong resistance.

4. *The area of social control to accomplish corrective planning is small in comparison with the area over which control cannot effectively be exercised.* The basic forces and processes of city growth move inexorably forward and the efforts of man to modify them are puny and ineffective in comparison. Institutions are constantly changing but by an evolutionary process rather than as a result of conscious direction in accordance with plan. Only minor changes from the natural pattern can be accomplished without major changes in the institutions which form the market framework. These minor changes may have great social significance.

5. *City planning starts with the process of forecasting the pattern which will naturally evolve from social forces as they operate within the market framework.* City planning must start with an analysis

of the natural market forces. Much of the plan directly expresses the unmodified effect of these forces. This part of planning requires a thorough understanding of social forces and institutions and requires the application of social science methodology.

6. *The next step in planning is to determine upon what modifications of the natural growth pattern are socially desirable.* The social significance of modifications is a matter involving economic, sociological, legal, and political considerations. Except for sanitation or engineering problems involving minimum standards commonly accepted, judgments of the social significance of modifications in urban structure require a point of view and a background of education not provided in technical schools.

7. *The practicability of accomplishing modifications determined to be socially desirable must be tested by an analysis of market forces and related institutions.* Modifications can be accomplished only by positive action. It is necessary to determine at what points in the market process stimulants or controls must be applied in order to accomplish the plan and what market forces or institutions must be subjected to pressure. The various control devices must be tested as to practicability, and with respect to the probable repercussions in other parts of the market, so that reform at one point shall not be offset by retrogression at another. The real estate market is a social institution and must be analyzed by those who understand its complexities.

I have not described the entire process of city planning, down to the last fine map, but I have outlined the gist of it. The other things are derivative for the most part, or in some cases are conditioning factors. City planning is basically

a process of social engineering in which the materials are human beings and human activities, and where the laws and principles are out of the social sciences.

Everyone knows that planning is presently in the hand of people with technical backgrounds. The world should be grateful to the civil and sanitary engineers, to the architects and the landscape architects who, by reason of propinquity to the practical physical problems of city growth and change, moved naturally into the field of social engineering. There is no implication that all have done badly for many have acquired an understanding of social problems and have learned to apply social science techniques.

But it has been disappointing that the planning fraternity as a whole has moved so slowly toward a recognition of the role of the social sciences in planning. There has been much lip service and some honest appreciation. However, planners continue to recruit their staffs from among architects and engineers, and, most symptomatic of all, city planning curricula in all but a very few educational institutions give little or no place to the social sciences. For this lack, social scientists are no less responsible than the planners although it might be expected that the

group which has publicly assumed the responsibility for the future urban pattern in America should insist upon rational planning education.

In view of the lack of a sound and comprehensive system of planning theory, principles and standards, it would be reasonable to expect the planning fraternity to positively encourage basic research in urbanism. Social scientists are well aware of the grave deficiencies in our knowledge of the urban structure and the principles of urban growth. There has been scattered research in this field by ecologists, geographers, and land economists. But to many a social scientist, city planning as presently conducted is as imperfect as machine design would be if the designing engineers did not fully understand the principles of mechanics or have scientific knowledge of the properties of metals. True, we must not forego attempts to improve the urban mechanism simply because our knowledge is incomplete but we should be straining every nerve in an integrated research program.

When will planners stop long enough in their headlong passage from catch-word to panacea, from urban redevelopment to progressive planning, in order to return to fundamentals?

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# Big Inch Pipe Lines and the Monopoly Competition in the Petroleum Industry

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THE petroleum industry is one of the great, complex industries of the American economy. Since the buccaneering days of John D. Rockefeller, extremes of monopoly and competition have prevailed. The survival of small firms has been continually threatened by the controls which large firms have exercised over the most efficient means of transportation. In recent years pipe lines have been the most important form of overland transportation for petroleum. In spite of the Hepburn Amendment to the Interstate Commerce Act (which provides that all oil pipe lines are common carriers) the independent producers and refiners have not made use of pipe lines for long distance transportation. The Interstate Commerce Commission, charged with the regulation of common carriers, has not been successful in providing equality of opportunity for independent shippers of petroleum and petroleum products.

The crux of the competition-monopoly situation in petroleum lies in the integrated nature of some firms and the non-integrated character of others. In relation to integration, transportation is the most strategic factor. During the present war emergency a revolutionary new pipe line system is being built between the most important producing areas and the most important consuming areas of the nation. These new lines may become instruments of either increased or decreased concen-

tration. In the following discussion, after an analysis of the relevant factors, a suggestion is made which, it is thought, will reduce substantially the inequality of opportunity between independent and integrated firms.

## I.

While the relation of pipe line operation to the problem of monopoly in the petroleum industry has been relatively neglected by economists,<sup>1</sup> the concentration of activities in the industry as a whole is well-known and only a brief summary of certain aspects of the voluminous data on ownership and control need be presented here. The general picture which emerges shows that a relatively small number of firms (about twenty) hold approximately two-thirds of the entire investment, based on net depreciated value of assets. The other third of the investment is held by thousands of small producers and marketers and several hundred small refiners.<sup>2</sup> The individual firms range in size from the one-man prospector to the two-billion-dollar Standard Oil Company (New Jersey). The T. N. E. C. and other investigations have designated the twenty largest

\* For the best general treatment of pipe line transportation in relation to the structure and control of the petroleum industry, see Roy Prewitt, "The Operation and Regulation of Crude Oil and Gasoline Pipe Lines," *Quarterly Journal of Economics*, February, 1942, pp. 177-211. Prewitt's study antedates the Big Inch period.

<sup>2</sup> Temporary National Economic Committee, Investigation of Concentration of Economic Power, Hearings, 1939, Part 14-A, p. 7706.

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firms as the "majors" and they constitute the monopoly element. The "independents" are concerns which are not owned or controlled by any of the majors. Those firms not included among the majors but controlled by them are sometimes called the "secondaries."<sup>3</sup> The majors are also referred to as "integrated" companies because they engage in each of the chief branches of the petroleum industry; namely, production of crude oil, refining, transportation, and marketing. Though somewhat arbitrary, this distinction between "majors" and "independents" is a first approximation useful for scientific inquiry into the functioning of the industry.

Extensive studies by the T. N. E. C. give the best picture of the extent of the concentration of control.<sup>4</sup> In the production of crude oil the twenty largest companies in 1937 produced 52.7 per cent of the domestic production of crude oil from 23.7 per cent of the producing wells. The independents have the poorer wells. Ownership of crude oil reserves is more concentrated than annual production. The four largest companies held approximately 32 per cent of the total proven reserves of the United States, and the twenty largest approximately 70 per cent.<sup>5</sup>

#### Concentration of ownership and control

<sup>3</sup> For a list of the majors and 344 secondaries, compiled by the anti-trust division, see *Complaint—U. S. v. American Petroleum Institute et al.*, Civil Action No. 8524, September 30, 1940, pp. 6-15.

<sup>4</sup> Apart from the factors that will be discussed below, the revolutionary changes that have taken place in the petroleum industry since Pearl Harbor do not alter in any significant way the following analysis. Concentration has been increased, and the T. N. E. C. data and the anti-trust data are more likely to represent an understatement than an overstatement of the present degree of concentration.

<sup>5</sup> T. N. E. C. Monograph No. 39, pp. 10, 67. See also *Complaint—U. S. v. American Petroleum Institute*, p. 31, for a summary table showing per cent of ownership and control in various phases and functions of the industry.

is greater in refining than in production or reserves. On January 1, 1938, the twenty majors owned 75.6 per cent of the country's refining capacity and 85.2 per cent of the cracking capacity.<sup>6</sup> Nearly all independent refiners are located in the oil-producing regions, whereas much of the refining capacity of the integrated firms is on the Atlantic seaboard near the great consuming centers of northeastern United States. The integrated companies also have large refineries along the Gulf Coast.

In recent years the majors have accounted for about 80 per cent of the domestic sales of gasoline. Though most retail businesses are not owned by the major firms, they effectively control the outlets through leasing arrangements known as the "Iowa Plan" and through exclusive dealing contracts.<sup>7</sup> In spite of the high concentration, marketing is the most competitive branch of the industry, though even here competition is limited chiefly to the non-price variety.

The greatest concentration and the most effective monopoly control exercised by the major firms are in the transportation field. By virtue of its fluid nature, petroleum and its products are most economically transported in specialized equipment such as pipe lines, ocean tank-

<sup>6</sup> T. N. E. C., *Hearings*, 14-A, p. 7730.

<sup>7</sup> T. N. E. C., *Hearings*, 14-A, p. 7817. See especially the testimony of J. Howard Pew, President of the Sun Oil Company (Part 14, pp. 7207 ff.) Though Mr. Pew denied that the dealers were under contract to buy exclusively Sun Oil products, he admitted that none of the stations owned by Sun and leased to dealers sold gasoline of any other company. The reason given in explanation was that the 100-per-cent dealer was charged half a cent less per gallon than one who bought some other brand in addition to Sun. Mr. Pew claimed this price differential was based on a cost differential but, when unable to explain the basis of the cost difference, he said, "Certain trade practices . . . have grown up over the years and that is one of those trade practices which obtain in our industry" (pp. 7210-7211).

ers, tank cars, and tank trucks. At the beginning of 1938 fourteen major companies owned 89.0 per cent of the crude oil trunk line mileage,<sup>8</sup> 96.1 per cent of the gasoline pipe line mileage,<sup>9</sup> and 87.2 per cent of the total tanker tonnage.<sup>10</sup> Most of the railway tank cars in petroleum service are owned by tank car companies which appear to be controlled by the major oil companies. However, non-availability of tank cars to independents has not been a problem except during the war emergency, when most petroleum transported to the east coast area was by tank car. As will be explained below, railroad rates on petroleum and its products is one of the chief sources of complaint by independents. The T. N. E. C. hearings produced evidence that the railroads had conspired with the major oil companies to increase the rail rates on gasoline to markets which the majors reached by tanker, and in return the majors were to stop using trucks on hauls longer than 50 miles in areas served by rail. The railroads also agreed to revise or deny leases to independent service station operators on railroad property.<sup>11</sup>

Officials of the major companies, when called on to explain the alleged monopoly, characteristically denied its existence in their industry. Mr. J. Howard Pew, President of the Sun Oil Company, testi-

fied before the T. N. E. C. as follows: "Without taint of monopoly, it (the petroleum industry) is characteristically an American industry."<sup>12</sup> Mr. William S. Farish, late president of the Standard Oil Company (New Jersey), summed up his statements appraising the industry in these words: "In essence, the statements mean that there is competition in the petroleum industry, and that competition in the petroleum industry has been in the public interest."<sup>13</sup>

Obviously, it is not for the heads of major oil companies to decide the issue of the existence or non-existence of monopoly in their industry. Nevertheless, the statements of Mr. Pew and Mr. Farish call for explanation. In view of the preponderance of evidence that monopoly does exist, why should they so vigorously proclaim that theirs is a competitive industry? The managers of large business corporations in the United States traditionally proclaim the existence as well as the virtues of competition but, ironically, they are generally neither able nor willing to behave according to the rules of a competitive economy. A simple principle of economics is the somewhat paradoxical one that by striving to maximize profits, competition reduces profits to a minimum or normal rate of return. Effective competition places the individual business at the mercy of impersonal market forces. Consequently, the self-interest of a particular business enterprise or small group of enterprises lies in defeating the forces of competition. While the business man strives to remove the restraining grip of competition, competition is the rationale which justifies the institution of private ownership and control of the means of production, and upon this institution rests

<sup>8</sup> T. N. E. C., *Hearings*, 14-A, p. 7723.

<sup>9</sup> *Ibid.*, p. 7729. This figure is for seventeen major companies.

<sup>10</sup> *Ibid.*, p. 7731. This figure is for fifteen major companies.

<sup>11</sup> See testimony of E. L. Orvis, attorney, Jersey City, N.J., T. N. E. C. *Hearings*, Part 15, pp. 8309-8323 and Part 16, pp. 9067-9089. For correspondence and statement presented by Mr. Orvis, see Part 16, pp. 9312-9347. Although this conspiracy has not come before the federal anti-trust division, the validity of the charges of Mr. Orvis seem to be accepted by such persons as Secretary Ickes, acting as Petroleum Coordinator. See *Hearings on Gasoline and Fuel Oil Shortages*, 77th Congress, S. Resolution 156, Part 2, pp. 448-449.

<sup>12</sup> *Hearings*, 14, p. 7195.

<sup>13</sup> *Ibid.*, Part 17, p. 9659.

his position of leadership, income and wealth in the community. If this analysis is correct, then we would expect Mr. Pew and Mr. Farish to behave just as they appear to have behaved, i.e., to strive for a monopolistic position while verbally championing the cause of competition.<sup>14</sup> The reason business men used to act as competitors (if in fact they ever did) and no longer behave in this way is to be explained by changes in technology and market structure, not by any changes that have taken place in the *weltanschauung* of the business enterprisers.

A defense sometimes used for the major companies is that the independents of yesterday are the majors of today. This, however, seems largely to miss the point so far as equality of opportunity is concerned. What is important is not conditions which permit some independents to become majors, but the guaranteeing of equality of competitive opportunity while they still remain independents. If independent operation is technologically inferior, then equal access to low-cost transportation, even if attainable, would not offset the advantages of integration and large-scale operation. In this event, we should look forward to the demise of independents and accept monopoly as unavoidable. But neither the independent nor the major companies concede the inevitability of monopoly.

Another factor which lends some plausibility to the denial of monopoly by Mr. Pew and Mr. Farish is the traditional view that the essence of monopoly is re-

striction of output and high prices to consumers. Restriction of output has not been an important factor, and insofar as it has been practiced, it has contributed to a less rapid exploitation of our dwindling petroleum reserves. Likewise, prices of petroleum products to consumers have perhaps not been high enough to discourage sufficiently the consumption of this valuable and limited natural resource. Monopoly in petroleum has taken the form of a struggle for the more or less exclusive right to exploit a rich natural resource.

Spokesmen for the majors find their most plausible defense against alleged monopoly in the transportation field, where the abuses of monopoly power, if true, are most damaging to competition. The integrated firms contend there is no problem of governmental policy to be decided here because transportation already is under the jurisdiction of the Interstate Commerce Commission. In answer to queries why the Sun Oil Company pipe lines never carry any products for independents, Mr. Pew replied: ". . . the Interstate Commerce Commission is already in existence and has jurisdiction over the rates and activities of these pipe lines, and it seems to me that this discussion is very academic because, after all, the sole responsibility of adjusting this whole question lies at the door of the Interstate Commerce Commission."<sup>15</sup> Mr. Farish said substantially the same thing: "If he (the independent) has a complaint as to rates, the remedy is at law. He has his appeal to the Interstate Commerce Commission."<sup>16</sup> However, this defense loses its plausibility when the notorious impotency of the Interstate Commerce Commission

<sup>14</sup> More recently, Ralph W. Gallagher, successor to Farish as president of the Standard Oil Co., in answer to Vice-President Henry Wallace, has taken up the line followed by his predecessor. See statements in daily press, September 12, 1943. R. T. Haslam, director of Standard Oil (New Jersey) and head of Standard's public relations work, has issued similar statements in defense of competition. See *National Petroleum News*, October 13, 1943, pp. 13-14.

<sup>15</sup> T. N. E. C. *Hearings*, Part 14, p. 7239. Mr. Pew made this same point at least half a dozen times. Cf., also pp. 7199, 7200, 7202, 7234, 7253,

<sup>16</sup> T. N. E. C. *Hearings*, Part 17, p. 9711.

in pipe line regulation is contemplated. We turn now to this problem.

## II.

Neither the control of transportation nor the denial of monopoly is new to the petroleum industry. At a time when the Standard Oil trust comprised about 90 per cent of the nation's refining capacity, John D. Rockefeller and his associates denied the existence of the trust and declared that the various companies alleged to be in the trust were essentially separate and largely competitive.<sup>17</sup> As the I. C. C. said in its report to Congress in 1907, railway rebates and pipe line control contributed more than anything else to the monopoly of the Standard Oil Trust.<sup>18</sup> Professor Allan Nevins has recently re-worked with great care the history of the Standard Oil Company. Though he is at great pains to be fair in evaluating the Rockefeller practices, he condemns unqualifiedly the various rebate and pipe line policies. Nevins calls them "the cruellest and most deadly devices yet conceived . . . for the extinction of competition."<sup>19</sup> He says the "crushing and intolerable" differences in transportation costs "explain the rapid surrender of nearly all surviving independents" in refining.<sup>20</sup>

Practices in the petroleum industry more than those in any other single American industry were responsible for the anti-monopoly and anti-discrimination provisions of the Interstate Commerce Act, the Sherman Antitrust Act, the Elkins Act, and the Hepburn Act. Though

the power to regulate petroleum pipe lines was born of a monopoly situation, the administration of this law has done little to restore equality of competitive opportunity in the oil industry. In the years since 1906 only four pipe line cases have come before the Interstate Commerce Commission. In its first pipe line case, decided six years after the Hepburn Act became law, the I.C.C. declared pipe line companies shipping products purchased from producers before shipment should be classed as common carriers.<sup>21</sup>

A full ten years elapsed before the second pipe line case came before the Commission. In response to protests by independent shippers that rates were too high and the minimum tender too great, the Commission reduced the minimum tender but found nothing unreasonable in the rates charged.<sup>22</sup> The decision to reduce the minimum tender was taken rather falteringly. The Commission said it did not have sufficient knowledge to pass on a reasonable minimum tender and only after much equivocation held that tenders were unreasonable to the extent that they were in excess of 10,000 barrels. Following this decision the defendant, Prairie Pipe Line Company, immediately discontinued service between the points in question and the independents' oil was never carried. No further complaints were filed.<sup>23</sup>

The period elapsing between the second and third pipe line case was even longer than between the first and second. In 1934, twelve years after the second case and twenty-two years after the first case,

<sup>17</sup> Allan Nevins, *John D. Rockefeller* (New York: Scribner's, 1940), Vol. I, p. 616.

<sup>18</sup> *Railroad Discriminations and Monopolies in Coal and Oil*, 59th Congress, 2nd Session, H. Doc. No. 606, January 28, 1907, p. 14.

<sup>19</sup> *Op. cit.*, I, p. 325.

<sup>20</sup> *Ibid.*, I, p. 546.

<sup>21</sup> *In the Matter of Pipe Lines*, 24 I.C.C. 1 (1912).

<sup>22</sup> *Brundred Bros. v. Prairie Pipe Line Co.*, 68 I.C.C. 458 (1922).

<sup>23</sup> See F. R. Black, "Oil Pipe Line Divorce by Litigation and Legislation," *Cornell Law Quarterly*, June, 1940. Reprinted in *Congressional Record*, October 8, 1940, pp. 6234-6241.

a general investigation of crude oil pipe line rates was instituted by the Commission,<sup>24</sup> reportedly as a result of pressure from other government agencies. In December, 1940, six and one-half years after the case was opened, a report was issued in which the pipe line firms were ordered to show cause why they should not reduce their rates to levels which would yield them a return of 8 per cent on investment. This, however, was merely a preliminary ruling. Ten years have now elapsed and this crude oil pipe line case has not yet been concluded.

In 1941 the only case involving gasoline pipe line rates came before the Commission in *Petroleum Rail Shippers v Alton and Southern Railroad, et al.*<sup>25</sup> The Commission ordered the Great Lakes Pipe Line Company and Phillips Petroleum Company to reduce their rates below the existing level from origins in Oklahoma. Even after the reductions were made the rates were still greatly in excess of cost-plus-ten per cent, the "normal rate of return" established by the Commission.<sup>26</sup>

Actually, the decision to lower pipe line rates did not help the independent shippers because whether the rates were high or low they were unable to ship by pipe line. They knew this and concentrated their energy on a demand for lower rail rates on petroleum. The rail rates were reduced somewhat but remained much in excess of the cost-plus-five-and-three-fourths per cent return calculation of the Commission. For example, from Tulsa, Oklahoma to Kansas City, St. Louis, Omaha, Chicago, Milwaukee, and St. Paul, the rail rates prescribed as reasonable averaged 31.3 per cent above

<sup>24</sup> *Reduced Pipe Line Rates and Gathering Charges*, 243 I.C.C. 115 (1940).

<sup>25</sup> 243 I.C.C. 589 (1941).

<sup>26</sup> See table on p. 663 of 243 I.C.C. 589.

cost-plus-five-and-three-fourths per cent on property value.<sup>27</sup>

This important case comes to this: (1) If the independents had been able to ship by pipe line, they would have contributed to the excess earnings of organizations which, at another stage of the industry, were their competitors. Since the actual cost of operation represents the effective rate to the integrated companies, nominal rates greatly in excess of costs are no handicap to them. Thus the economic effect on competition is the same as a rebate. (2) Actually, there are almost no instances either before or after the decision in which independents shipped by pipe line. Generally speaking, the only transportation available to independent shippers has been motor and rail. Cost by tank truck is relatively very high except for short distances, and rail rates on gasoline have been maintained far above the cost-plus-return level. This analysis indicates clearly that the I.C.C. has done little to alleviate an untenable situation.

Working on the theory that money paid by pipe line subsidiaries to their parent companies constituted a rebate within the meaning of the Interstate Commerce and Elkins Acts, the Justice Department instituted on September 30, 1940, in the United States district courts, three test cases against the major oil companies.<sup>28</sup> For reasons unexplained in the public record, these three test cases were dismissed from the courts; and on December 23, 1941, the Justice Department filed suit against 20 major oil companies and 59 affiliated pipe line firms. Under the triple penalty provision of the Elkins Act, the

<sup>27</sup> This figure is based on data given by the Commission on pp. 615, 617 and 644 of the Commission's report.

<sup>28</sup> The three defendants named were the Standard Oil Company (Indiana), The Great Lakes Pipe Line Company, and the Phillips Petroleum Company.

amount of the penalty was estimated to be at least \$1,500,000,000.<sup>29</sup> On the same day the complaint was filed, a consent decree was entered.<sup>30</sup> According to this final judgment, dividends paid by pipe line companies to parent companies were limited to 7 per cent of the latest Interstate Commerce Commission valuation of pipe line property. Earnings in excess of 7 per cent were to be credited to a special surplus account, and the increment in value corresponding to the surplus was not to be added to the valuation on which the 7 per cent was based. It should be noted that this was purely a dividend limitation and bore no relation to the actual profits, tariffs, or the valuation on which the tariffs were to be based. The effect of this decree was to waive the \$1,500,000,000 penalty and to do virtually nothing to eliminate the violations enumerated in the complaint.

This settlement by consent decree was reached at a time when the submarine menace to ocean tankers had reduced the chief source of east coast supply of crude oil to a trickle, and rail and pipe line facilities were being taxed to the limit. The problem was to get petroleum to the east coast at any price. Consequently, the major oil companies (which supply this area almost exclusively) were in a favorable bargaining position because they could contend that expansion of their overland facilities could not be undertaken if they were threatened by a billion-and-a-half-dollar contingent liability. Meanwhile, this investigation and those of the Interstate Commerce Commission have been either dropped or postponed for the duration.

This is the present state of federal attempts at regulation of interstate petroleum pipe lines. Since the I.C.C. was given jurisdiction in 1906, only four cases have come before it and in every case the Commission has demonstrated an ineptitude for dealing with the monopoly-competition problem. Therefore, the contention that there is no need for any positive action in the petroleum transportation field is not valid. It may, however, be contended that the problem will have to be worked out after the war. The following section will show that the revolutionary changes now taking place in pipe line transportation create a new problem the solution of which cannot wait until after the war if we are to forestall greatly increased concentration of economic power in the hands of the major oil companies.

### III

The chief remedies suggested for the pipe line monopoly problem have been; (a) vigorous enforcement of the Sherman antitrust law and of the rebate and anti-discrimination provisions of the Interstate Commerce, the Elkins and the Hepburn acts; (b) divorce of pipe line firms from companies producing, refining and marketing petroleum and its products. The first of these calls for more initiative than the I.C.C. has shown to date in administering its authority over pipe lines. Assuming the Commission were willing to exercise its full authority to try to convert pipe lines to a genuine common carrier status, there are a number of steps which could be taken: (1) the best engineering intelligence could be employed by the Commission to ascertain reasonable minimum tenders. (2) Storage facilities for independent shippers could be required at both the shipping and the receiving ends of the lines. (3) Terminals

<sup>29</sup> Cf., *Congressional Record*, April 23, 1942.

<sup>30</sup> Complaint and Decree—United States v. the Atlantic Refining Co., et al, District Court of U. S. for the District of Columbia, Civil Action No. 14060, December 23, 1941.

could be required at points reasonably convenient for independent shippers. (4) The alleged custom of forcing, by economic pressures, the independent producer of crude oil to sell in the field at prices largely determined by the pipe line companies—or by their parent companies—could be more thoroughly investigated and controlled. (5) Pipe line rates and rail rates on petroleum could be reduced to equitable levels such that traffic shipped by independents would not return an exorbitant rate of profit to the major companies, and those independents forced to ship by rail because of location would not be forced to pay rates based on "what the traffic will bear." These and other steps necessary to give meaningful content to the common carrier concept could be taken by the Commission within the framework of its existing powers.

The divorcement of pipe line firms from their parent companies rests on the principle that transportation should be separated from production. The chief argument against divorcement rests on the contention that pipe lines are a part of the plant facilities of the integrated companies and therefore can not be separated economically from other branches of the industry. Undoubtedly, there is validity in this contention that divorcement is not practicable in many instances and that a wholesale attempt at divorcement might disrupt the efficiency of operation of the integrated firms. Until the present war emergency nearly all pipe lines have been built by firms engaged in other branches of the industry and if these firms had not built the lines they would probably not have been built at all. It seems unnecessary to disintegrate the major oil companies just to make pipe line transportation available to non-integrated companies. Even if divorcement were accom-

plished through application of the commodities clause, there is no assurance—from experience with this doctrine applied to railroads in the anthracite coal industry—that the desired results would be accomplished. The possibility and even probability of continuing spheres of influence can hardly be prevented even by the most skillfully-drawn legislation. Our legislation has not reached the point of denying an individual the right to own shares of stock in one company just because he owns stock or participates in the management of another corporation. If there were such a law, it would be almost impossible to enforce and would involve direct interference with personal property and with civil liberties. In other words, to be effective such regulation of private enterprise as would be needed to force an integrated firm to act without prejudice as the common carrier of its non-integrated competitors tends to defeat the liberal policies it is intended to champion.

A new point of departure is therefore suggested, not necessarily to the mutual exclusion of anti-trust enforcement or divorcement, but as a policy which, with minimum legislative and property changes, offers greater opportunity of breaking the transportation monopoly in petroleum. Our suggestion is that the federal government continue to own and operate the so-called Big Inch lines which have been built during the war emergency. Several strategic considerations support this suggestion.

In view of the great carrying capacity of the 24-inch crude oil line and the 20-inch products line from Texas to the New York area, a policy which would permit these lines to operate as genuine carriers would in itself relieve the transportation handicap of the independent shippers. Perhaps of even greater significance, these lines could serve as a yardstick for meas-

uring the performance of the privately-owned lines, especially in relation to judging what is economically and technologically feasible in the rendering of pipe line services to a large number of small shippers.

A fundamental principle which should underlie the post-war disposition of government war plants is the lessening of the concentration of private economic power. If the Big Inch lines are permitted to gravitate into private hands, they will almost certainly become instruments of greater concentration. This is indicated by the arrangement under which the pipe lines are being operated at present. Title to the \$95,000,000, 24-inch crude oil line resides with the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation. These facilities have been leased to the Defense Supplies Corporation, another R. F. C. Subsidiary. The Defense Supplies Corporation does not operate the line directly but has it operated by the War Emergency Pipelines, Inc., which transports and delivers crude oil and heating oil. While it is in the pipes, the petroleum is the property of the United States government.

War Emergency Pipelines, Inc., which acts as agent for the Defense Supplies Corporation, is not a government organization but a non-profit private corporation, stock in which is owned by eleven of the major oil companies.<sup>31</sup> A preliminary

survey indicates that all the sales and all the purchases of crude oil are made by these eleven major companies either directly or through subsidiaries and affiliates. Terms of the contracts under which Emergency Pipelines, Inc., operates the 24- and 20-inch lines are not public information.<sup>32</sup> While presumably these companies have no first option to purchase the facilities after the war emergency, undoubtedly the major oil companies desire to gain control after the war. There is a provision in the Cole Pipe Line Act which states that the government must dispose of all pipe lines authorized under the Cole Act within one year after the end of the unlimited national emergency which began by presidential declaration on May 27, 1941.<sup>33</sup> The proposal suggested in this paper would require a change in this provision of the law.

The desire to have private interests take over the big inch lines is supported by the head of the R. F. C., Jesse Jones. He has specifically cited the Big Inch pipe

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Cities Service Company. The directors of War Emergency Pipelines are J. Howard Pew, President of Sun Oil Company; Robert Colley, President of Atlantic Refining Company; Ralph W. Gallagher, President of Standard Oil (New Jersey); and Robert E. Wilson, President of Pan American Petroleum and Transport Company (Standard Oil of Indiana). For some interesting insights into the early history of the 24-inch line, see Special Committee to Investigate Gasoline and Fuel Oil Shortages, *Hearings*, United States Senate, 77th Cong. 1st Ses. S. Res. 156, Part II, pp. 542 ff. Some of the independents bitterly opposed the 24-inch line because they felt it would give additional advantages to the major oil companies. *Ibid.*, 551.

<sup>31</sup> Letter from Defense Supplies Corporation.

<sup>32</sup> U. S. Statutes at Large, Vol. 55, Part I, Public Laws, p. 610. Section 9 of the Law reads, in part: ". . . and in no case shall any pipe line constructed, extended or completed under authority of section 4 be operated or maintained by any department or agency of the government after the expiration of one year after the termination of the unlimited national emergency proclaimed in the proclamation issued by the President of the United States on May 27, 1941."

<sup>31</sup> These eleven companies are Standard Oil Company (New Jersey), Shell Oil Company, Socony-Vacuum Oil Company, Atlantic Refining Company, Cities Service Company, Sun Oil Company, the Texas Corporation, Consolidated Oil Corporation (Sinclair), Gulf Oil Corporation, Pan American Petroleum and Transport Company (Standard Oil of Indiana), and Tidewater Associated Oil Company. The assets of these eleven companies at net depreciated value comprised about 53 per cent of the assets of the entire American petroleum industry at the beginning of 1939. W. Alton Jones, President of War Emergency Pipelines, is also president of

lines as government facilities which should be turned over to private ownership after the war.<sup>34</sup> However, disposing of these facilities to private interests means turning them over to the major companies because no other interested group has sufficient capital to purchase them. If our analysis of the situation is correct, this is not a desirable social policy because it will increase the weapons of concentration in the hands of the major companies and hasten the final disappearance of the independents, who up to this time have been preserved largely by the discovery of new oil fields and the expansion of the industry. The nation's petroleum resources have been so fully explored that discovery of important new regions or even fields of great importance can hardly be expected,<sup>35</sup> and in the absence of positive action to assure equality of opportunity the independent is likely to disappear almost completely.

The revolutionary significance of the Big Inch lines arises because they promise to be less costly than ocean tankers in carrying crude oil and petroleum products from the great Texas fields to the great consumers' markets of the east coast. This would have seemed incredible a few years ago. In the 1942 National Resources Planning Board report on "Transportation and National Policy," G. Lloyd Wilson asserted: ". . . tankers and barges operate at much lower costs than pipe lines, and it is doubtful whether the large volume of traffic to the Atlantic seaboard will ever move other than by water except in a war emergency" (p. 469). Prewar dominance of tankers in long-distance trans-

portation is indicated by the fact that before the war emergency about 95 per cent of the volume of petroleum deliveries to District No. 1 (the east coast states) was by ocean tanker and scarcely more than 2.5 per cent by pipe line. The remaining quantities were transported by barge. No gasoline or crude oil moved to the east coast by tank car. Assuming that the postwar demand for petroleum products remains about the same as the prewar demand, the 24-inch line, with a capacity of 300,000 barrels a day, can furnish about 20 per cent of the total District 1 demand, and the 20-inch line, with a capacity of 235,000 barrels daily, can supply an additional 15 per cent.

Estimates of the comparative costs by tanker and by the Big Inch pipe lines vary considerably. A reasonable estimate for prewar average unit cost by efficient tanker for the 2500-mile trip from the Texas Gulf Coast to North Atlantic ports would seem to be about 16 cents per barrel. Some tanker costs were lower but most of them were higher. The Petroleum Administration for War has estimated that cost by the 24-inch crude oil line is 13.5 cents without amortization. Amortization on a 50-year basis would bring the total unit cost to about 15.25 cents for the 1341-mile line from Longview, Texas, to Linden, New Jersey.<sup>36</sup> One writer places the cost by the most efficient tanker in peace time at 16 cents and the average tanker cost at 22 cents as compared with a pipe line cost of 13 cents.<sup>37</sup> This estimate is based on 5 per cent depreciation of the pipe line and a 100 per cent load factor. With a 90 per cent load factor the cost per barrel rises to 15 cents. Engineers who constructed the line say it will

<sup>34</sup> Cf., *Washington Evening Star*, July 22, 1943.

<sup>35</sup> V. C. Finch and G. T. Trewartha, *Elements of Geography, Physical and Cultural* (New York: McGraw-Hill, 1942), p. 571. See also House Naval Affairs Committee, *Interim Report on the Petroleum Situation*, October 5, 1943, p. 1058.

<sup>36</sup> Naval Affairs Committee, *op. cit.*, p. 1074.

<sup>37</sup> Paul Reed, "Pipe Line Will Compete with Ocean Tankers," *Oil and Gas Journal*, January 7, 1943, p. 58.

last 100 years. If depreciated on this longer period, the estimated average cost per barrel with 100 per cent load factor falls to 9.6 cents for the 1341-mile haul. Since there is probably not enough oil in Texas to supply the line at capacity for 100 years, the 20-year depreciation period seems to be a more reasonable basis for cost calculations.<sup>38</sup>

A third estimate places the cost for the 24-inch line at 16.2 cents per barrel during the war period and at 12 cents after the war. This same source estimates the wartime costs of the 20-inch products line at 23.5 cents and the postwar costs at 18 cents.<sup>39</sup> The differential between war and postwar costs is accounted for by a difference in power costs. Though the above estimates vary in detail, the general conclusion is the same in each case: namely, the costs by 24- and 20-inch pipe lines will compare favorably with cost by oceangoing tankers after the war.<sup>40</sup> Although no accurate data on costs of new high-speed tankers are available, it seems possible that pipe line costs may be lower than tanker costs.

Let us assume for the moment that after the war the full average unit cost by pipe line is greater than the full average unit cost by the more efficient tankers and that we are confronted with the alterna-

tives of using the pipe line or building more tankers. Under these conditions the pipe line should be used if its incremental (marginal) cost is not greater than the full average cost of building and operating additional tankers.<sup>41</sup> Omitting depreciation entirely, the unit cost by pipe line based on the second cost estimate given above is reduced to 8.7 cents per barrel on traffic from Texas to New Jersey. This figure is below any likely full average unit cost by tanker. If in addition we make the likely assumption that the cost of gathering crude oil into the 24-inch trunk line is less than the cost of delivering oil to shipside on the Gulf Coast, the advantage is in favor of the pipe line.

An additional possibility is that the end of the war will find us with an excess number of tankers on hand.<sup>42</sup> In this event the relevant cost comparison would be between the incremental cost by pipe line and the incremental cost by tanker. However, the physical mobility of the tankers makes it possible for the surplus ones to shift into other uses or to routes other than that from the Gulf Coast to the Atlantic Seaboard. Since our domestic reserves are dwindling rapidly, the surplus of tankers might well be used to haul oil to North Atlantic ports from foreign countries rather than from the Gulf Coast. The pipe line is a very specific asset (in

<sup>38</sup> During the emergency the lines are being amortized on a five-year basis. This raises the accounting cost to 31 cents (13.5 cents operating, plus 17.5 amortization cost, according to P.A.W. figures), but this high amortization rate opens the way to a greatly reduced amortization charge for the postwar period. At least one of the trade journals has suggested that this high rate of depreciation would permit the government to sell the pipe line to private interests at a low price. Cf., Paul Reed, *loc. cit.*

<sup>39</sup> *National Petroleum News*, July 28, 1943, p. 36.

<sup>40</sup> For additional cost estimates and an excellent analysis of pipe line costs, see Edgar G. Hill, "Engineering Economics of Long Petroleum Pipe Lines," *Petroleum Technology*, January, 1943, pp. 1-13, esp. p. 9.

<sup>41</sup> Some economists would contend that the incremental cost by pipe line is the relevant consideration in any event, and that the rate charged should be equal to this cost. Cf., Harold Hotelling, "The General Welfare in Relation to Problems of Taxation and of Railway and Utility Rates," *Econometrica*, July, 1938. Cf., also A. P. Lerner, "Statics and Dynamics in Socialist Economics," *Economic Journal*, June, 1937, pp. 253-270; and R. H. Montgomery, "Government Ownership and Operation of Railroads," *Annals of the American Academy of Political and Social Science*, January, 1939, pp. 137-145.

<sup>42</sup> Tankers have been coming off the ways at the rate of about one a day.

the Hayekian sense) and cannot be put to other uses easily, though the possibility that it may be used for transporting natural gas should not be overlooked.<sup>43</sup>

However, the economies of the Big Inch lines will be much greater to points inland from the Atlantic coast than at the coast, and it is in this connection that the strongest argument in favor of keeping the Big Inch lines out of the monopolistic control of the major oil companies arises. Consider first the case of the crude line. This is now a trunk line operating between the largest producing field of the nation, east Texas (where there is still a fairly large number of independent producers), and the great refining center in New Jersey and eastern Pennsylvania. All the refineries at the destination of the line belong to the major companies. Before the war much of the gasoline refined in New Jersey and eastern Pennsylvania was shipped by pipe line into western Pennsylvania and eastern Ohio; and Sun Oil piped gasoline as far west as Indiana. Let us take the case of gasoline received in a community in eastern Ohio. The crude oil was shipped by tanker 2500 miles to New Jersey from the Texas coast, perhaps after being shipped a hundred miles

from inland fields. The crude oil was refined into gasoline in New Jersey and the gasoline then transported 350 miles by pipe line from New Jersey to the consuming community in Ohio. The product has traveled a total of nearly 3,000 miles to reach its destination, whereas by the Big Inch line it would have to travel only about 1,000 miles, only one-third the distance. Even granting that the 3,000-mile haul was economical before the war when tanker costs were much less than pipe line costs, it would be extremely uneconomical to continue this roundabout routing. There should be a shift away from the East Coast concentration of refining westward along the crude oil pipe line. The areas west of Pittsburgh clearly should be served by refineries located along the Big Inch crude oil line rather than by refineries located on the Atlantic seaboard.

While this more economical location of refineries might take place under the aegis of the major companies, there is at least one main factor which would tend to prevent it. The majors have very heavy, fixed investments in their east coast refineries and would tend to resist the westward migration. On the other hand, as a genuine common carrier running through relatively populous areas, the 24-inch line would offer numerous opportunities for new investment in refineries which could deliver gasoline to adjacent consuming markets more cheaply than it can be delivered into the interior regions from the Atlantic seaboard refineries.<sup>44</sup> If the line is government-owned and operated, inde-

<sup>43</sup> The possibility that the Big Inch line may be used for transporting natural gas from Texas to the northeastern United States is very real. Senator Lee O'Daniel of Texas stated in a senatorial hearing that the eleven major oil companies which originally sought permission to build the 24-inch crude oil line were merely reviving a still earlier plan to construct a 1500-mile, 24-inch, \$80,000,000 natural gas line from Texas to New York. To this he objected because he felt natural gas line would drain Texas of much of its natural gas, thus retarding the industrialization of Texas and promoting the concentration of industry in the northeastern section of the nation. Mr. Pew of Sun Oil Co., one of the directors of the War Emergency Pipelines, is reported to be interested in the 24-inch line for transporting natural gas to Philadelphia and vicinity after the war. See Special Committee to Investigate Gasoline and Fuel Oil Shortages, Part II, pp. 542 ff.

<sup>44</sup> John E. Shatford, coordinator of refining under the NRA, has suggested a similar result would follow if pipe lines were made common carriers in fact. He presented to the T.N.E.C. an analysis accompanied by a map showing typical refinery locations. His data are based on pre-"Big Inch" lines. Cf., T.N.E.C. Hearings, Part 15, pp. 8545 ff.

pendent refiners would have at least an opportunity to invest, whereas if the line becomes "plant facilities" of the majors there will be no such opportunity for independent capital.

There is nothing in the proposal for a government-owned common carrier which of itself guarantees prosperity to, or even the continued existence of, small-scale independent refineries. However, independent refiners almost universally contend that small-scale refining is not less efficient than large-scale refining. If this be the case, the independents should be able to meet the competition of the majors.

Refinery technology, like pipe line technology, has progressed rapidly during the war and the general trend has been toward an increase in capacity and cost of plant of the most efficient size. For example, fifty high octane plants built by the federal government during the emergency are reported to have cost \$500,000,-000, or an average of \$10,000,000 per plant. Such figures do not brighten the prospects for small business though an independent with a \$10,000,000 investment would be "small" in comparison with the major companies. To be efficient, refining plants probably do not have to be as large as those built by the government during the emergency.<sup>45</sup>

In any event, the independents who claimed their smaller plants were technologically no less efficient than the larger

refineries of the major companies would have an opportunity to prove their contention under the proposed program. This applies to those refineries already located in the oil-producing regions which would use the gasoline lines as well as to the new independent refineries which would have an opportunity to set up plants along the new crude pipe line route. The independent refineries located within reach of the 20-inch products line would be able to reach more distant markets immediately and at low cost while branch lines could be extended to connect new areas not now served by the products line. The independent producers of crude oil who are now forced to sell at their wells at prices largely determined by the majors would be spared forced sales at depressed prices. In the east Texas field where the Big Inch line originates, independent production still comprises a significant proportion of the total output.

The inability of the two Big Inch pipe lines to carry all the traffic offered to them raises the question of proper rate policy by this common carrier system. For example, if the pipe line rate based on cost is less than the cost by tanker, the integrated companies would gain through using the government-owned common carrier. At this rate more petroleum would be offered than could be handled. In these circumstances, use of the lines could be rationed among the various shippers, the rate could be raised to equality with efficient tanker cost, or more pipe lines could be built either by government or by private capital. Since petroleum reserves are present in limited quantities and the investment in additional pipe lines is great and also since the plant has very few alternative uses, it may be undesirable to build more lines. A satisfactory basis for rationing shipments would be

<sup>45</sup>For example, in Houston an independent who had a modern refinery costing \$1,500,000 added a \$2,500,000 high octane unit and a \$2,000,000 synthetic rubber raw material plant and is operating at higher efficiency for the Defense Supplies Corporation. In 1939 representatives of the majors testified that it would cost \$2,000,000 to construct a thoroughly modern refinery with a daily capacity of 5,000 barrels, the minimum size which approaches optimum efficiency. Cf., T.N.E.C. Hearings, Part 15, pp. 8351, 8661; Part 17, pp. 9707-9708.

difficult to establish, although Congress might, as a matter of national policy designed to preserve small business, guarantee a minimum purchase and set quotas for the remainder. Probably the policy most consistent with maximum social advantage, especially in use of the products line, is to give priority in purchase to inland points like Cincinnati, Wheeling, etc. at rates higher than the through rates to the Atlantic seaboard. The higher inland rates would be fixed to equate the supply to the demand at points where no low-cost alternative form of transportation is available. Only the surplus above inland requirements would be shipped to the East Coast, where the pipe line rates would be equal to the tanker rates. If no surplus were available for through shipment, the eastern section of the products line might be used to transport gasoline from the seaboard refineries west into Pennsylvania and adjacent areas. This westward cutback would be much shorter than in the prewar period, and would be justified only in the event of a decision to construct no additional pipelines of large diameter. The simplest policy would be to fix through rates equal to efficient tanker costs and to set inland rates in proportion to the through rates, raising and lowering the rate structure to assure that the amounts offered would be neither more nor less than the full capacity of the lines.

However, the particular rate level and rate policy are matters of lesser importance than the availability of facilities on a common carrier basis. A difference in transportation costs of from five to ten cents per barrel amounts to only one-eighth to one-fourth cent per gallon and is not a large factor, whereas the difference between the prewar tanker cost of 17 cents and the present substantially re-

duced rail rate of \$1.65 to \$1.86 per barrel is prohibitive.

On the administrative and legal side, the proposal for government-owned common carriers stands up well. The pipe lines have been built with government capital and our suggestion involves merely a continuation of government ownership. The difficult problem of determining a fair valuation is avoided under this plan. An objection frequently raised against government ownership and operation of industries is that business enterprise is too complicated for government to handle efficiently and well. Putting to one side the merits of this argument in general it has little force in this particular case because owning and operating a petroleum pipe line is a relatively simple matter from an administrative point of view. The chief tasks are maintaining the line, operating pumping stations, and keeping close record of the receipts and discharges of products. The power of the federal government to provide for national defense would seem to be a sufficient constitutional basis for government ownership and operation of these strategic pipe lines.

The abuses of monopoly-dominated petroleum transportation are indelibly printed on the record of American economic development, and an important part of the American tradition is the fight against the tyranny of monopoly power. Government regulation of privately owned petroleum pipe lines has failed miserably. More direct means of assuring equal competitive opportunity are needed. A program designed to permit men of independent capital to find economic opportunity through access to natural resources is certainly in the tradition of Jeffersonian democracy.

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## Some Aspects of Administrative Pricing as Related to Land Economics Research

By VIRGIL L. HURLBURT\*

WITHIN the range of substitutability as laid down by soil and climate, favorable price for the product largely determines the choice of agricultural enterprise. The major product marketed from an area is that which producers judge or have had reason to believe will give the greatest net return over a period of years. The response to price may be slow and delayed by fear of fluctuations from year to year but it is none-the-less real. Although producer habits and customs may delay shift from one commodity to another, the incentive for gain is usually able to overcome inertia.

Undoubtedly, acreage in soybeans, peanuts and hemp has increased since 1940 partly because of the appeals made by war food agencies. However, the greater part of the increased production resulted from the favorable, guaranteed price as well as from the prospects of profits on these crops as compared with probable gain on alternatives. Likewise, the phenomenal increase in hog production resulted from favorable prices and the relationship of those prices to prices of grains and of

other livestock. Increase in potato acreage in Aroostook County, Maine, in the face of numerous production obstacles, was directly associated with price policy.

These are but instances of the obvious relationship between commodity *price* and *type* of farm land use. One can only guess what increases might have been made in other products had farm prices been as favorable and had supplies of labor, fertilizer, machinery, and equipment been easily and cheaply available. But a guess now is futile; the need for the development of scientific methods that can be used to make reliable estimates and forecasts is self-demonstrated. The challenge of the situation as a whole is that, not only in the remaining war years but also in the post-war era, public policy will be concerned with the kinds and the amounts of agricultural production and with its geographical distribution. From a research point of view, the challenge presents itself for the systematic study of the relationships between the structure of farm prices and the distribution of agricultural production for the purpose of so arranging prices as to direct and guide agricultural production.

The following discussion deals with a single phase of the problem. Although there is also need for further careful analyses of the impacts of prices of farm products on land utilization, this presentation is limited to consideration of selected instances of administrative pricing. As used herein, the term "administrative

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pricing" involves organized governmental action in the determination of the price of a commodity. This action may result from specific legislation or from general legislation that establishes only the framework within which the governmental agency operates. Both state and federal activities are included. The purpose is to examine the significance of administrative pricing, to indicate some of the possibilities of its further use, and to demonstrate the necessity for study of administrative pricing as a strategic factor, the application of which may influence the use and the control of land.

The determination of prices through administrative procedures as a part of the war effort now extends to most agricultural products. No major type of essentials is excluded. If the prices so determined result in the encouragement of the necessary production and in checking inflation, the wartime purpose may be assumed accomplished. The same objectives may not be sufficient in peacetime. It is not too early to develop price policy for the postwar years. The significance of pricing procedures, as well as of price itself, in affecting land utilization cannot be ignored if adequate land policy and price policy are to evolve.

Wartime pricing is full of complex issues. Concentration on victory, with the necessity of paying more attention to results than to costs (and the time factor), prevents the adaptation and adoption of new procedures during war. The framework of the existing system is used because it is expedient and because any significant changes would encounter concerted opposition from producers and from marketing organizations. A realistic attack on problems of postwar adjustment includes an examination of the pricing system, of both the wartime and the pre-

war characteristics. The differences between the two are not so great as may appear at first glance. Administrative pricing was much in evidence during the past decade. Its use was merely broadened to meet the exigencies of a nation at war. Because of the complexity of issues in wartime pricing this discussion deals mainly with prewar cases and the possibility of postwar application.

Numerous analyses have been made of various phases of price policy, of producer response to price changes, and of the elasticity of demand for various farm products. The reporting of prices and the construction of indices are man-month absorbing activities in state and federal agencies. Likewise, agricultural economics literature is replete with articles on marketing, covering most functional and organizational aspects. But in these studies as a whole, only occasional side glances have been cast at relationships between marketing and land utilization, or at the impacts of pricing on land utilization. Possibly the explanation is that price per se has been too much regarded as an end, instead of as a means to an end.<sup>1</sup>

By and large, the land economist has left the analysis of prices and pricing to other specialists. Even in discussions of institutional factors in land utilization,

<sup>1</sup> See T. W. Schultz, *Redirecting Farm Policy* (New York: The MacMillan Company, 1943), p. 7. "It is indeed significant that the elements of a price policy have received little or no consideration in the discussions of farm policy. The emphasis has fallen on the specific programs—the crop control features of AAA; the granary loans of CCC; the low-income help of FSA; the food stamp plan, school lunches, and other disposal schemes of what was AMA; the erosion control and soil practices of SCS; etc.—and not on the function of prices. The same thing has happened in other fields. It appears to be true of the whole price policy of government; OPA and the legislation under which it operates also view prices or a kind of price change as goals, not as economic directives."

the significance of neither marketing nor pricing processes has received special attention. Rent theory assumes product prices as given. The writer is aware of no study that explores the possibilities of administrative procedure through which probable returns from one of a set of competing uses might be made favorable enough to provide the basis for a new land use pattern. For example, what farm land uses can replace cotton, wheat or tobacco farming where these are a one-crop system? How can milk be priced to affect the distribution of its production? Rent theory, used as a tool, might provide part of the answers if the possibilities through administrative pricing are also explored. This type of analysis would be especially helpful in the development of programs of land-use adjustment.

Fluid milk is an outstanding example of the administrative determination of price of an agricultural product. "There is now no market of any size in New England in which both the producer and resale prices are not administratively determined."<sup>2</sup> Orders are slowly being put into effect in all major cities; every few weeks the press carries an announcement of an order or a change in the order for cities from coast to coast. Although many institutionalized forces are at work in the determination of price, federal market orders and the regulations by state milk control agencies set the general economic framework for the exchange of milk between producers and dealers, and between dealers and consumers. It is known that this qualitative framework influences the combination of farm enterprises and causes shifts in the distribution of production, but in what manner and to what extent are questions

that require further careful study despite the many analyses that have been made of farmer response to price.

The areal structure of market price for milk in the Northeast is made up of a dispersion of markets under federal order and a scatter of smaller markets under state regulation. The milk sheds for the major markets (New York, Boston, Philadelphia, for example) are divided into differential zones which are intervals of distance from the market. The prices established in the several zones are the resultant of market price less a specific calculated transportation charge which approximates the freight rate. In addition, on some of the markets a premium is paid for nearby production. Major milk sheds overlap each other and often encompass the sheds of secondary markets. Furthermore, the whole body of health regulations and inspection requirements established under state and municipal police power may not affect price directly but can and does influence the individual producer in his choice of market. The administratively-determined class prices in these markets, plus the several different means that dealers use to calculate payments, and the functioning of various methods of deducting farm-to-market hauling charges, provide the basis for payments to producers.

In the determination of market areas for pricing purposes, little attention seems to have been given to the significance of the location of producers or to alternative producer outlet, aside from the generality of encouraging receipts from a supply area large enough to meet the ordinary needs of the market. Nor has sufficient analysis been made of probable short-term and long-term shifts in production that might result from the pattern of prices imposed by the milk-pricing system as a whole.

<sup>2</sup> Alan MacLeod, "The Local Structure of Milk Prices in New Hampshire Markets," *New Hampshire Agr. Exp. Sta. Bulletin 332*, June, 1941, p. 3.

The variations in *farm* prices of milk are most striking where milk sheds overlap, and of course farm price reflects market price. Prices received by neighboring farmers may vary as much as a dollar a hundredweight for the same class and test of milk. In addition to the differences between prices on separate markets, between hauling charges paid by individuals, and in services that dealers and truckers perform for patrons, farm prices vary because of the practice of paying for milk by utilization classes. Especially in the case of dealer pools within a single market, farm-to-farm price inequalities are created by the fact that dealers dispose of supplies by utilization classes and pay producers on the basis of the percentage of total volume disposed of in the several utilization classes. Neighboring farmers selling to two dealers on the same market may thus receive significantly different prices in any payment period. The impacts of class prices in the market-wide pool are of the same nature, but here the variation in farm prices arises mainly when two separate markets tap the same supply area—in other words, where milk sheds overlap. Not all of the differences in farm prices can be attributed to the pricing system, or especially to the administrative character of the system, but its functioning does contribute to the inequalities. Variations in quality account for some of the spread from farm to farm; however, most of the fluid milk in the whole Northeast is produced under much the same health regulations and varies mainly in fat and solids-not-fat content; much of the milk that is disposed of as Class 2 meets Class 1 requirements.

Class 1 prices on established markets vary surprisingly. Markets less than 60 miles apart are known to have differed more than \$1.00 per hundredweight; two

markets 10 miles apart have differed 50 cents per hundredweight. Surely, transportation costs cannot account for such variations. Pricing systems vary in detail and in application from state to state, from market to market within states, and sometimes from dealer to dealer within a market. The explanation of why farmers do not shift between markets and thereby force eventual removal of the variations in prices is mainly that organization is lacking and the individual cannot always attain the end himself. Too many forces prevent him from shifting often. He is dependent on a continuing and stable market outlet.<sup>3</sup> The system as a whole also continues to exist because consumers have lacked organized representation in the public hearings, whereas both producers and dealers have been effectively represented.

Wartime experience has demonstrated that favorable market price alone is not sufficient to call forth greater production. It is also known that favorable price can cause increase or maintenance in areas that otherwise would go out of or at least decrease production. The implications of this aspect alone are many for the postwar years. If higher prices are made to prevail in Zone 1 under the marketing order, will a larger portion of the milk supply come from these near-by areas? Without continued price advantage will non-farm uses replace farm land uses more than has been the case within forty miles of Boston, New York, Philadelphia or Chicago? The areas adjacent to cities are usually "high cost" areas. The "high production cost" which results in some degree from competition among major uses of land is in part responsible for the effective pleas

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<sup>3</sup> For further discussion of this point and for a careful analysis of local price structure, see Alan MacLeod, *ibid.*

for marked price differentials in their favor that producers have been able to make in price hearings.

The character of natural resources bears no more forcefully on systems of farming or on patterns of production than does the coercion of prices. Other factors also need further analysis, but the issue here is the significance of the pricing process. A faulty pricing mechanism can outweigh other elements in any program of land use adjustment. A price advantage received through the process of price determination creates in the favored area a resource equally as valuable as that which a superior grade of soil has over one of lower productivity.

In spite of the comparative advantage which location offers to dairy farmers in the Northeast, farm abandonment was taking place in 1940 and is even continuing in 1944. Dairy farming could have continued longer on some of these farms if the pricing system had been pointed specifically at the objective of directing production. No plea is being made here for retention of agricultural use in areas that are not physically suited to such use by virtue of soil resource and climate. But land use changes resulting from faults in the pricing process are quite another matter. Some of the farmers in the west central part of Massachusetts, for example, have not been able to compete effectively on the Boston market with farmers in the near-by zone because of the way in which price advantages have been given to the latter, even though soil and climate characteristics may favor the more distant location. The locational factor has accounted for a large portion of the absolute difference in price; but aside from hauling costs, the pricing system itself also played an important part. These same conditions can be found in other states.

And so long as the present system remains in use, many farmers will continue in the artificially favored locations, whereas under state or region-wide pricing they might have to shift. The operation of the institutionalized pricing process encourages the near-market producers in their belief in the possibility of obtaining price rises through the administrative system and thus tends to perpetuate the status quo. Such beliefs are little different from the hopes of the Montana wheat farmer for a "bumper" crop—*next year*. The argument can be offered that the distant producer has benefited by being able to sell a portion of his milk as fluid. In other words, he shares in the higher price of Class 1 the year around and contributes heavily to "surplus" during flush season. But some pricing method had to be developed to bring his product to the market. And even though he benefited by the process, this does not negate the necessity of modifying other phases of the system which are to his disadvantage.

One of the problems for careful study is an appraisal of the advantages that would result, and to whom these would result, if milk production shifted to locations farther from the major markets. Would the consumer benefit by a decrease in the cost of milk if a smaller portion of the market supply were produced in the "high cost" zone? Possibly the savings might be countered by higher transportation costs, unless technological improvements in transportation facilities and adjustments in transportation charges solve the hauling problem.

Public policy in land use adjustment will need to include effective pricing programs that are aimed at influencing the geographical distribution of specific kinds of agricultural production if there is to be an orderly arrangement of land use and

occupancy. The issues are particularly complex in the rural-urban fringe which is largely encompassed in Zone 1. The principles involved are likewise applicable in the other differential zones for milk marketings and extend also to rural areas for which no market orders exist.

A type of research analysis which is basic in the job of improving the pricing system for milk is illustrated by the wartime production capacity studies conducted by the Bureau of Agricultural Economics and the Land Grant Colleges. Although designed particularly to appraise capacity, an equally important phase of these studies was meant to deal with the distribution of that capacity by production areas within the states. Answers were sought to the questions of *where* these products can be produced; what essential products, on an area basis, make the most efficient use of available input factors; and what additional input materials are required for capacity production. The idea, in brief, was to get a good picture of the pattern of production distribution which would contribute most to wartime needs. Unfortunately, this tended to be interpreted as totally unrealistic and many of the estimates were made in terms of capacity of existing farm enterprises without significant shifts in types of production. In all of these studies price was assumed as "satisfactory," but in some of the reports estimates were made of the levels of prices that would be necessary to attain the indicated increases in production. The philosophy in these instances was in the direction pointed out by Geoffrey Shepherd—"Instead of production control being used to set prices, price control may have to be used to set production."<sup>4</sup>

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<sup>4</sup> *Journal of Farm Economics*, November, 1942, p. 75.

With appropriate revision, the capacity type of study will have many possibilities for post-war research activity. The concept of "capacity" will have to be revised to fit the new set of conditions but, more important, the studies will need to be pointed specifically at appraising the geographical distribution of production. The analyses must go beyond the point of describing physical distribution, as presented in the graphic survey series.<sup>5</sup> The studies must explain the reasons behind that distribution. The next step would be to explore the possibilities of motivating necessary land use adjustment through administrative pricing. This, as a whole, calls for the refinement of the body of theory on the geographic distribution of production. The work done by Raymond P. Christensen in his mimeographed report, "Using Resources to Meet Food Needs," opens up new avenues in this direction for it deals with a means of measuring and comparing production of various commodities. A less comprehensive scope may be required at first, however. The early appraisals might deal with a particular commodity, such as fluid milk.

Some of the long-time implications of programs that could be based on such studies can be visualized now. For fluid milk the prospect is that there would be a broadening of the present market areas and the establishment of region-wide base prices, with appropriate allowance for transportation costs. It would undoubtedly mean a revision of federal market orders for major cities such as New York, Philadelphia and Boston; at least, it would necessitate their closer integration as functioning units. It might also mean

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<sup>5</sup> See O. E. Baker and A. B. Genung, "A Graphic Summary of Farm Crops," Misc. Pub. No. 267, U.S.D.A., and O. E. Baker, "A Graphic Summary of Physical Features and Land Utilization in the United States," Misc. Pub. No. 260, U. S. D. A.

significant revision of the modus operandi of state milk control boards. If within broad regions there were particular production areas for which sound social policy decreed that milk production be increased, then price allowance could be the motivator. Likewise, if certain areas were questionable or had other higher use possibilities, a lower price could be established by the same token. Any specific area differentiations by administrative pricing would have to be handled carefully, however, to prevent the spread of the interstate trade barrier type of economic control.

Since the indication of research is the main purpose of this discussion, only the broad outline of functional organization can be given for the type of price-determining organization. The determinations might be made by composite groups made up of the technician, the government representative, the farmer, and the consumer. Means would have to be developed for the organized representation of these, particularly the producer and the consumer. A local, an areal, possibly state, regional, and national framework would be needed. This might not be particularly innovative. The framework is suggested by the old county agricultural planning organization, but of course several improvements therein would be necessary.<sup>6</sup> Governmental agencies would have to play a lesser role, with more of the decisions being made by the layman.<sup>7</sup>

The above is an extreme simplification of a complicated issue. The writer is aware of the controversial factors involved and can perceive some of the ob-

jections that will be offered. On the score of objections, it is pertinent to raise the question of how significantly different in principle is this from that which already exists. State milk control commissions now determine prices on specific markets through legally established procedures. The development and application would be a long-time procedure. Possibly some of the weaknesses in the present system of milk pricing are attributable to the speed of its adoption and the fact that it was superimposed upon existing faults.

Although the foregoing indicates that some of the faults in the present administrative pricing system for milk are serious, the recommendation is for further use of administrative pricing. The faults in the system can be corrected if the desire for correction is present and if the alternative is demonstrably superior. The agricultural economist as a technician has not been particularly apt at impressing the layman with the idea that economic systems are man-made and that changes in them are inevitable. A type of organization that produced desirable results under a different set of circumstances in the past is no more correct or "American" than are means that may be devised now to meet new and more complicated situations. Many fail to realize that even one hundred years ago the economy of the nation operated within a realm which was outlined by governmental policy. To be sure, there were fewer activities of government and there were fewer instances of governmental regulation of economic activities. But the present must be judged in terms of the present, not in terms of the past. The application of scientific knowledge to practical problems ought to be no different in principle in the case of solving economic situations than in the case of perfecting another machine to further decrease the necessity of human drudgery.

<sup>6</sup> See Neal C. Gross, "A Post Mortem on County Planning," *Journal of Farm Economics*, August, 1943.

<sup>7</sup> See Rainer Schickele, "Society and the Masses," *American Journal of Economics and Sociology*, October, 1942.

Max Lerner's "Ideas Are Weapons" will bear study; his discussion of the effect of Chief Justice Marshall's concept of property on court procedure and on present-day economic organization could be matched by numerous similar instances of the power of ideas in 1944.

Another type of research analysis which is basic in the job of improving the pricing system for milk is along the line of the studies in inter-regional competition. The writings on inter-regional competition contain many references to the significance of pricing procedures. For example, "Programs that lean on historical bases may ignore divergent regional trends and retard desirable interregional adjustments. Marketing agreements and orders tend to give differential advantage to certain areas which may or may not be justified on a long-time basis if maximization of the national income be taken as a criterion."<sup>8</sup> Or again, "Furthermore, location theory or the theory of market supply based on transportation costs is incomplete and must be brought into the proper relation to the physical, institutional, and various other types of factors which help to determine or explain the geographical distribution of production."<sup>9</sup>

Further research on inter-regional competition may well include more analysis of pricing procedures, especially in appraising the importance of areal price structure in contrast to devoting primary attention to measuring response to price. If *pricing* is visualized as one of the tools for effecting desirable change, and if in addition an adequate body of regionalism theory is developed, studies in inter-regional competition can fill a broader place in agricultural economics. Producers in

New England are now wondering at the nature of the competition likely to develop after the war—particularly that resulting from adjustments beginning to be made now in the south and in the midwest in dairy, poultry, and vegetable production.

From the standpoint of land use adjustment, the impacts of administrative pricing will be greatest in instances wherein shifts in uses may result. Residential or recreational use may be the type of use that replaces dairy farming if changes in the price structure force changes in the regional dairy production pattern. Shifts between certain commodities may influence farm income but have little influence on type of farming. For example, a change in price of corn as compared to that of soy beans operates within a narrow framework, even though there are differences in input requirements and differences in what enterprises may be combined with corn because the land requirements of the crops are much the same. But a change from potatoes to milk does call for a change in major type of farm land use. The strong prospect for the present administrative type of price for potatoes to be continued after the war suggests many important problems for research.

The instance of milk pricing presents a nearly universal example of administrative pricing. Other cases are less obvious but even before the war the prices of many farm products were determined in part by administrative arrangements. The broad scope of administrative pricing, as affecting farm products directly, would include the benefit and conservation payments which apply to particular crops rather than to special practices, the loans on specific crops by the Commodity Credit Corporation, the regulation of futures by the Securities and Exchange Commission, and tariff protection for agricultural com-

<sup>8</sup> "Analysis of Interregional Competition in Agriculture," Bureau of Agricultural Economics, United States Department of Agriculture, April, 1939, p. 2-3.

<sup>9</sup> *Ibid.*, p. 37.

modities, whether of the export or domestic market type, to name a few. The functioning of the pricing system in the marketing of many agricultural products will bear analysis of the type suggested for milk.

Administrative pricing is likewise significant in its application to the determination of prices of other goods and services used by the farmer. The instance of transportation costs, especially railroad rates, is an important one because the farmer as producer bears the burden of these costs.<sup>10</sup> The wheat and the range-beef producers read the St. Paul, Kansas City, or Chicago market quotations and subtract specific amounts per bushel and per pound to calculate local value of their products. The study of the regional structure of rail and truck rates as related to geographical distribution of production is another type of analysis for further work.

The functional significance of transportation as one of the major land uses can also bear research analysis. Numerous new questions will arise from technological developments. Presumably, these changes will continue to decrease the costs of moving goods from one place to another, thus tending to remove many advantages now present by virtue of location. Whether transportation is conceived as a major land use or as a service or function is of less importance than is recognition and attack on the problems involved.

Further instance of the impacts of administrative pricing may be seen in the wartime farm labor recruitment program. Wages for recruited labor have been established by agricultural wage boards. The temporary shift of rural population,

partly in response to these wages but mainly from recruitment, may become permanent. Some laborers have already taken up farms in the areas to which they shifted. This type of recruiting may indicate another means of decreasing the pressure of population on land in some of the "poorer" agricultural sections. Explorations of the use of administrative pricing techniques may also extend to the improvement of land tenure. Some of the possibilities in this direction may be seen in the following:

"Part and parcel of whatever reforms may be adopted for owner and/or tenant operation must be a reform of the existing anachronistic farm-labor system. Legislation similar to that for industrial labor, though more moderate in degree and adjusted in character to the particular farming conditions but comprising minimum housing requirements as well as minimum wages, is necessary as a stimulus for economic forces that will gradually ameliorate the worst conditions. All-out national defense efforts of American agriculture will make wage-floors for agricultural labor necessary as a stimulus to more efficient labor use and a protection against war profiteering. Farm-labor legislation will be the strongest safeguard against undesirable shifts toward large-scale farming as a by-product of tenure reforms. Continuation of state and federal activity in behalf of camps for mobile farm labor is highly desirable."<sup>11</sup>

This discussion has dealt with only a few phases of price policy as related to land utilization and research in land economics. In brief, the thesis is that price policy can be made to include *more* of one of the main functions of price—directing production. The development of a workable system for determining in advance the price for specific products or services will require detailed and scientific analysis. Undoubtedly, mistakes have been

<sup>10</sup> See Henry A. Wallace, "Transportation Costs Stifle Fair Competition—Railroad Rate-Making Procedures," address before civic and labor groups, Dallas, Texas, October 20, 1943.

<sup>11</sup> Karl Brandt, "Towards A More Adequate Approach to the Farm Tenure Program," *Journal of Farm Economics*, February, 1942, p. 225.

made and will continue to be made but these may be due to faults in the *operation* of the system rather than in the system itself. Adjustment of prices to direct production would necessitate the lowering of certain prices as well as the raising of others; and the pressure for increasing would always be greater than that for decreasing prices unless consumer participation in the processes can counterbalance the pleas of producers. Joseph S. Davis ably points out that the level of prices for oil crops had to be high because the general level of farm prices was high; and farmer pressure for price change cannot always be for revision upward.<sup>12</sup>

The further use of administrative pricing will have to be based upon specific social objectives. Price policy must have other ends than the direction of production and the disposal of a given volume of goods on the market. If only a volume of milk is produced that can be disposed of at prices which are extremely favorable to producers, then thousands of people are going to do without enough milk for a nutritionally adequate diet. Maybe the problem is to raise the income and therefore the purchasing power of low-income groups but the possibilities have not yet been exhausted in the field of improving distribution methods. Again, as a decade ago, there may be a piling up of surpluses of various commodities if the distribution system does not operate as efficiently as does the production system. Nor will a pricing system that brings forth the required volume of production necessarily solve the problems associated with farm income distribution. It will take the combined efforts of all social scientists to deal with these problems, and their efforts plus an educated public opinion to answer the single question of the extent to which ad-

ministrative pricing can be applied to the economy as a whole.

Some of the types of research investigation suggested are analogous to studies that have been made of local government problems by land economists. Taxation, governmental administration, and several other aspects of social behavior have been studied, as they were of special importance in land problems; the application of various instruments within the police power, especially rural zoning, grazing districts, and soil conservation districts, have received special attention by land economists. The criteria of judgment in the demarcation of a discipline is the strength and the nature of the bond between the particular factor and core problems of the field, rather than the categorical delineation of subject matter in the abstract.

New bodies of theory and new research techniques are needed. Not all of the problems may require special study, but the outstanding ones at least suggest a fertile field for research endeavor and few, if any, can pass unnoticed by the land economist. There can be little argument that the land economist has an essential function to perform in the delineation and appraisal of regional patterns of production. Likewise, more study is needed of the significance of location, the competition of major and minor land uses, and the provision of services and facilities for the changing pattern of uses. These occur within the continental boundaries of the United States but have some of the same far-reaching significance in both domestic and world economy that L. A. Salter notes as developing from the war.<sup>13</sup> The land economist has many unexplored opportunities to apply the tools of his trade, both in cultivating old and in plowing new ground.

<sup>12</sup> Joseph S. Davis, "Food As An Implement of War—The Responsibilities of Farmers," address before annual meeting of California Farm Bureau Federation, Santa Cruz, California, November 17, 1943.

<sup>13</sup> L. A. Salter, Jr., "Global War and Peace, and Land Economics," *Journal of Land & Public Utility Economics*, November, 1943. (March 11, 1944)

# Technique of Urban Redevelopment: Part I. Individual vs. Group Interests in Real Property

By ARTHUR C. HOLDEN\*

## *I. Legislative and Constitutional Background*

THE time has come when there should be less discussion of legislation and more consideration of techniques for reorganizing properties on a group basis. Now is the time for the formulation of procedure for the guidance of urban redevelopment corporations which have been authorized after a ten-year legislative struggle.

The winning of a legislative battle gives sanction to the use of necessary powers. It is a first step. The making of physical plans will require technical ability, imagination and experience. It must be remembered that physical plans are limited by social, legal and administrative concepts. For the creation of improved forms of enterprise and for the reorganization of conflicting property interests, imagination is as essential as is the creation of a new physical design.

The primary purpose of this article is to discuss reorganization technique. To assure ourselves of the ground on which we stand it is wise to view briefly the derivation of the legal rights with which we shall have to deal. First, as the name "urban redevelopment" implies, the technique of planning must deal with groups of properties rather than with individual unrelated plots of property. Behind this lies the belief that contract and property relationships are susceptible to improve-

ment and that this improvement will lead to the redevelopment of urban areas. This is an approach which differs greatly from the assumption that property rights constitute such a bar to progress that the only way out is for government to take property away from the existing individual owners and either administer the property through a public authority or dispose of it to a new set of owners under new restrictions set by government.

Second, urban redevelopment means coordinated planning. The master plan for the city as a whole must be considered as a mosaic made up of plans for the redevelopment of private property in specific localities on the basis of the group relations between properties. This implies that planning is based upon the coordination of the use of private properties as well as upon public facilities.

In localities where urban redevelopment projects are to be considered, those who control financial policy must attempt to establish criteria for measuring the desirable rate of capital expansion and for relating the program of property improvement to the progressive growth of the community. This means that activity in the building industry must not be advocated *merely* as a means for increasing employment. There must be a carefully worked-out relation between the services furnished for construction and the use which is derived from the finished buildings. The debt to those who build is temporarily discharged by the use of long-

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term credit; but over a period of years this debt must be liquidated by those who, as occupants, pay rent or the rental equivalent for the use of property. A large share of the maladjustments of the past have been due to failure to measure correctly the use values which are created by long-term capital facilities such as buildings. This should be a warning to those who over-stress "subsidy" as the easiest means to "stimulate employment" by unbalanced "spending for construction."

## II. Governmental Function

Before attempting to plan wisely it is essential to understand the relation of federal, state and municipal governments to the urban redevelopment program. Students of European housing policy have expressed impatience with the checks and limitations imposed by the American federal system. Such impatience is usually evidence of unfamiliarity with the Constitution of the United States. The right to coin money and fix the value thereof has been delegated exclusively to the federal government. This implies the power to shape *long-term* credit policy and includes the responsibility for improving methods for amortizing long-term credits extended to construction. Following the investigation of the Aldrich Commission, Congress provided for the expansion and contraction of short-term credits by establishing the Federal Reserve System in 1913. There is need for a similar co-ordination of the terms of flow and return of flow of long-term credit.<sup>1</sup>

The responsibility for making uniform laws respecting bankruptcy also has been delegated exclusively to the federal government. It is possible for Congress to

extend the definition of bankruptcy to include properties in areas affected by social and economic blight and to devise a new type of procedure for the composition of mortgage and tax debts arising as a result of urban blight.

The responsibility for defining and clarifying individual property rights remains with the states. The rights of the individual owner of real property are limited by custom and usage as well as by specific legislation. The restrictions imposed by the state upon the individual property owner are of two classes; those which protect society in general and those which protect the individual property against misuse of neighboring properties. Examples of the first class are building codes which provide for safety, for protection against fire, and for egress in case of danger, as well as for sanitary and health standards. Under the second class are laws which prevent the maintenance of a nuisance which violates the character of a definitely defined neighborhood. Although the original sanction of zoning ordinances was based upon the police power of the state, and particularly upon the need for maintaining standards of health, it is increasingly recognized that zoning laws may be broadened to establish reasonable standards of use and conformity to adjoining use.

The right to take private property for public purposes is also a basic right of the state. When the federal Constitution was written, provision was made for the assumption by the federal government of specific rights derived from the states. The need for taking private property for such public purposes as were specifically delegated to the federal government was self-evident. The Constitution specifically states<sup>2</sup> that the Congress may "exercise

<sup>1</sup>See A. C. Holden, *Money in Motion, the Social Function of Banking* (New York: Harper & Bros., 1940), Chap. xi, pp. 170-171.

<sup>2</sup>Article I, section 7, subsection 17.

exclusive legislative authority" over properties purchased only when acquired with "the consent of the Legislature in which the same shall be."<sup>3</sup>

The states have retained the power to create municipal subdivisions or other minor entities of government, chartered by, and subject to regulation by the state.

The state may delegate to its subdivision the power to expropriate property for public use. The conditions under which this may be done are set by the states through specific enabling legislation. These subdivisions include counties, municipalities, certain types of corporations which are authorized to carry out a public purpose and certain specially constituted public authorities. Another important power of the states is that derived from the state's power to create corporate personalities. As the creators of corporations, the states have the right, both through charter and through general laws, to regulate and restrict the actions of corporations.

The states are the source of legislation regulating the technique for planning and mapping. This is an essential power and provides for the relation between publicly-owned-and-operated property (e.g. streets, open spaces, etc.) and properties which remain in private ownership.

With the states rest, also, the power of defining and limiting the basis on which real property may be taxed, either by the state itself or by any of its subdivisions.

It must be remembered that all state subdivisions have limited powers derived only through the grant of power by the state. So far as urban redevelopment is concerned, the powers that have been del-

egated to the city to make building codes, zoning ordinances, etc., are important.<sup>4</sup>

It is important that cities get the full benefit of procedures on mapping and city planning established by state law.<sup>5</sup> Cities have to develop an improved technique for the planning of local districts and for co-ordination of local district plans with the general master plan of the city. As a part of the procedure of urban redevelopment, approval of a city planning commission should be required. New concepts of city and district planning need to be developed to secure adequate co-operation between city planning commissions and corporations organized to undertake urban redevelopment projects.

Inasmuch as urban redevelopment legislation permits special tax contracts between the city and urban redevelopment corporations, it is obvious that the governing body of the city must become a party to the drafting of the general charter of the corporation and must work out the general terms of the contract between the redevelopment corporation and the corporate city. Where special privileges and benefits are granted to corporations undertaking urban redevelopment, it is obvious that protective covenants must be entered into to prevent the abuse of the privileges granted. Reasonable legal restrictions are required which will prevent

<sup>3</sup> See Frank Backus Williams, *The Law of City Planning & Zoning* (New York: Macmillan Co., 1922); also George B. Ford, *Building Height, Bulk and Form* (Cambridge: Harvard University Press, 1931); Edward M. Bassett, *Zoning* (New York: Russell Sage Foundation, 1936); also *The Master Plan* (New York: Russell Sage Foundation, 1938).

<sup>4</sup> See Russell Van Nest Black, *Building Lines and Reservations for Future Streets* (Cambridge: Harvard University Press, 1935); especially appendix 111, p. 200, N. Y. Planning Enabling Law for Cities (Laws 1926, c. 690). Also Arthur C. Comey, *Transition Zoning* (Cambridge: Harvard University Press, 1933).

<sup>5</sup> This does not refer to the war powers of Congress.

excessive rentals or the anti-social exploitation of the property taken over by the corporation for redevelopment. Careful study is needed to explore and develop positive and forward-looking provisions which should be incorporated into the contract, in addition to required negative and restrictive provisions. By "positive and forward-looking provisions" the writer means provisions that will facilitate and encourage enterprising, constructive effort in redevelopment undertakings. It includes the search for concert of interests among the parties involved; namely, existing ownership and mortgage interests, the redevelopment corporation, existing and future renters and users of property, and the community. It means that conflicts of interest must be resolved and give place to concert of interest.

### *III. Recognition of Communal Values as a Component of Individual Property Rights.*

Three main considerations must be taken into account in the organization of a redevelopment corporation. First is the program for physical replanning; second, the program for the reorganization of the interests which now exist within the district; third, the financial plan which must relate the new program of physical planning and the new uses to be made of the property to the reorganization of the existing interests and uses.

The purpose to be served is very different from that which has characterized the usual real estate investment of the past. Urban redevelopment is not an outlet for investment funds seeking the highest possible return. It is not a search for the cheapest available land for an improvement in order to get the best possible market return. It is not a search for a situa-

tion which will warrant the payment of the highest available subsidy in order to further a piece of work that could not otherwise be accomplished.

A program of urban redevelopment is based upon long-term social interests and on the recognition that neither the best interests of individual private owners nor the best interests of the public can be served through the unconnected action of a multitude of small individual owners. Urban redevelopment is based upon the *recognition that both public and private benefit may be obtained by concerted action and the recognition that all individual property owners have a community of interest in the well-being and the efficient development of the section of the city in which their property is located.*

It is characteristic of the usual American municipality that boundary lines are precisely fixed for the various plots of privately owned property and publicly owned spaces, whether parks, squares, streets, or sites for public buildings. Access to streets is open at all times to persons without discrimination, but those who use the streets are required to observe the rules of traffic and to conduct themselves with decency. Parks may occasionally be closed to the public, but their use is circumscribed by rules which prevent benefits of the park from being injured by abuse or excessive use by individuals. Public buildings are open only at specific hours and the public in general is granted access only to certain corridors and public spaces.

The public also has certain definite rights of access to private property. The public may circulate through stores and through the public portions of hotels and office buildings without question. The public has a fundamental right to pass through private property for necessary ac-

cess to property beyond. The private owner may regulate or even deny passage as trespass; but if the public insists on asserting it, the local government may establish the right of passage by due process of law.

Custom and usage lay down the channels for the law. In our modern world the law has gone so far as to require those who maintain facilities for certain types of private business to maintain in addition certain conveniences available to the public. For example: hotels, department stores, restaurants, and even gasoline stations are required by most state laws to maintain sanitary facilities for the convenience of the public. Recently there have been creeping into zoning legislation many requirements which indicate the reassertion of public concern with the way in which private property is planned for use. In congested cities off-street loading facilities are being required in the design of mercantile and manufacturing buildings. In new, growing communities, especially, there is a tendency to require store buildings, gas stations, movie houses, and other types of buildings which attract patronage that comes in motor cars, to set back from the building line to provide adequate parking space. It is becoming more and more clearly established that those who plan for private property must recognize that the rights and convenience of the public must be provided for and that there are very few uses to which private property can be put that do not require the *recognition of a community of interest in that property by those who enjoy partial use thereof.*

But this community of interest extends beyond the rights of the public to participate in a partial use of private property. Private property also carries with it an interest in the community in which it is located. The set-backs for property lines,

to which we have just referred, are not designed solely for the convenience of that part of the public which patronizes those stores, gas stations, and similar businesses. They are required to prevent the choking of the public roads or the blanketing of neighboring properties.

Recognition of community of interest in private property is not new. For instance, the old English common law doctrine known as "ancient lights" presupposed that an owner of property had the right to enjoy the light and air coming to his property over the abutting property of a neighbor. It denied the right of a neighbor to shut off light and air from an existing window without consent or legal satisfaction. Abuse of this practice in England led most of the American states to outlaw the practice by statutes denying the right to payment for damages for shutting off light and air formerly enjoyed. It is to be regretted that there has been so little understanding in this country of the principle involved. The doctrine of ancient lights is evidence that interlocking interests are inevitably created by the right to enjoy the usufruct of property. It is plain that the fullest enjoyment of private property cannot be realized unless the user of the property is protected in the enjoyment of those rights which are inherently communal, as well as those rights which may be separately enjoyed without respect to community of interest.

Professor Ely has pointed out that the purpose of expropriation is to make "the interest of the individual conform to this social interest." When needs are essentially changed, expropriation may be used to bring about the transition or "to limit the right of the proprietor in order to place a servitude upon it. . . . We might say that expropriation means the substitution of one form of property for another."

er. Expropriation does not carry with it the idea of the abolition of property or of lessening the property of individuals, but of a forced change in the form of property of individuals.<sup>6</sup>

There is especial significance in this view of expropriation. Too frequently we have thought of expropriation as an act through which government "ousts" the private interest, then steps in and, through the exercise of *public ownership*, performs a public service in contradistinction to a private service. Professor Ely, who derives his concept from Professors Wagner and von Ihering, suggests that expropriation may be used as a directional force to accelerate change in use. If we think of government as using expropriation to take away *certain rights only* while leaving other rights to be exercised by the original owner, we realize that government, instead of acting to displace private ownership, may act to direct and protect the better uses of property against uses or abuses which are harmful alike to private property and to the community.

This is an idea which is the antithesis of the Marxian concept of *revolutionary socialism* or of the milder English concept of *evolutionary socialism*. Both of these European doctrines are foreign to the typical American conception of government. Nevertheless there has been so much controversy today over governmental ideologies that many Americans are beginning to confuse the issue and advocate wholesale taking over of property interests by government as if it were necessary to displace all individual rights in order to maintain social values. It is the writer's opinion that such an attitude is due largely to ignorance of the structure of government on the one hand and ignorance of

the structure of economic society on the other.

New York State passed the Urban Redevelopment Corporations Law in 1941 and the Redevelopment Companies Law in 1942 (amended in 1943). There is a significant difference in principle underlying these two pieces of state legislation. The former attempts to reach those interests which have suffered for lack of adequate protection of the communal rights which reside in property and to create new types of entities through which individual interests may unite to improve the control of their common interests. It aims by law to facilitate self-help and thus to restore vitality to the blighted sections of our cities. The remedy sought is organic and functional. The 1942 legislation seeks to create a direct outlet for the investment funds of large life insurance societies, and to utilize these funds to accelerate the redevelopment of blighted sections of our cities.<sup>7</sup> The remedy proposed aims to replace existing so-called private interests by other private interests which are stronger. It aims to demonstrate, at a time when such demonstration is much needed, that combined institutional funds are strong enough to accomplish by able management some of those tasks for which other impatient enthusiasts have been urging larger and larger spending by the federal government.

#### *IV. Analysis A Prerequisite to Planning*

An expected public benefit should be the compelling motive behind the physical plan for an urban redevelopment project. The task is to readjust the relations between the individual and communal interests involved so that greater public benefit

<sup>6</sup>See R. T. Ely, *Property and Contract and Their Relations to the Distribution of Wealth* (New York: Macmillan Co., 1914), II, chap. xx, pp. 496-510.

<sup>7</sup>Chapter 845 of the New York Laws of 1942.

may be secured. For instance, take such a simple improvement as the location of a new post office in a city of not more than fifty thousand inhabitants. Granted that in the past politics may frequently have entered into the choice of a site, it is common knowledge that post offices have seldom been placed on locations most desirable from the point of view of the physical plan alone. Too frequently the indicated excessive costs of land acquisition have precluded a decision in favor of the more desirable sites and opened the way for compromise tempered by the baneful influence of political favoritism. Similar considerations have governed the location of schools and other types of public buildings. Excessive site acquisition cost thus has influenced the course of city growth. It has often caused needless damage to adjoining properties because it seemed to necessitate planning and building in a way that was recognized as undesirable.

Excessive site cost has not only exerted an unfavorable influence upon the location of public buildings, but often has been the deciding factor which has located a manufacturing plant on a less desirable site but one where it was easy to shift a greater proportion of the burden of collateral responsibilities to others.

Urban redevelopment technique aims to bring economic and social values into balance. It assumes that it is in the interest of a community; first, to plan an improvement so that the greatest possible advantage may be secured; second, to plan it in such a way that its *benefits* may be as widely distributed as possible; and third, to plan it in such a way that the *burdens* may be as equitably distributed as possible.

This means that where an outstanding public improvement is sought, it should not be planned on a narrow pennywise basis. Not long ago a proposed route for

a new traffic connection to a bridgehead in New York was advocated on the ground that since the route selected had been laid out through back yards the cost of land acquisition would be economical. Complete disregard was shown for the possibility of spreading collateral benefits to the neighborhood to be traversed. There was failure to recognize the consequences of the completely negative policy of concentrating the damages upon property considered to be the least valuable with no attempt to spread the burden or to offset the damages by compensative benefits.

Urban redevelopment aims at the replanning of a whole area. It does not aim at a plan which provides only for an isolated improvement. It assumes an appraisal of existing interests and then a redistribution of shares of interest in the improved area after the replanning. It assumes that an outstanding improvement will have an effect upon the neighborhood in which it is located and that it will be wise to plan in advance for the changes which will inevitably follow. Since successful urban redevelopment will depend upon ingenuity in planning and upon ability to master a situation and then to adapt it to new conditions, the clearest way in which to present the principles of redevelopment seems to be to select a specific area and to analyze it as a specific problem. Varied emphasis upon the several principles applied will naturally produce varied results in different cases. Of course, in practice, each individual case must be separately studied and a specific solution reached for each.

#### V. Analysis of Local Area

The first step, in every case, should be an analysis of the district affected. This should be put into graphic form. (Cf.,

Figures I and II.) It is easiest to prepare blank diagrammatic maps of the district as it is and to indicate on separate blanks information respecting existing occupancy, use, and condition of buildings; income and outgo; tax valuations; mortgage obligations; traffic flow; special features and characteristics, both desirable and undesirable; and relation to adjoining districts. From these data, judgment as to the significance of the district in the life of the city may be formed. All of these points should be weighed in the light of changes that may be the result of re-planning and redevelopment. Existing uses must be weighed in relation to proposed future uses.

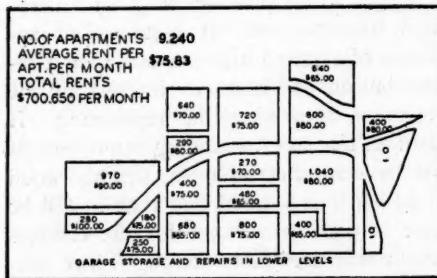


FIGURE I. NUMBER OF APARTMENTS AND AVERAGE MONTHLY RENTALS, BY BLOCKS, EXISTING IN SAMPLE DISTRICT ANALYZED FOR ILLUSTRATION.

*Diagrammatic Analysis.* Figure I shows diagrammatically the number of existing residential suites in each of the blocks included in the analysis together with the average rents for these existing family quarters by blocks. Figure II is a similar diagram giving the number of residential suites for the new super blocks and the average family rents in terms of dollars per month.

It is at once apparent that although the total number of families has been reduced, the total monthly residential rent has been increased more than threefold. While

the rents suggested will be under the market for this type of quarters, they are high for a project executed by cooperation between city and private enterprise. It is

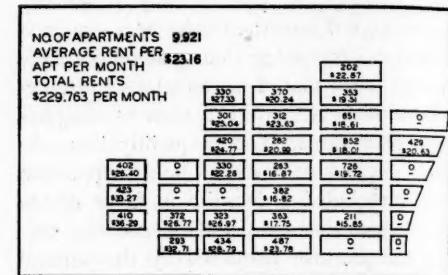


FIGURE II. NUMBER OF APARTMENTS AND AVERAGE MONTHLY RENTALS, BY BLOCKS, ESTIMATED FOR NEW SUPER BLOCKS. THIS DIAGRAMMATIC MAP IS A PART OF ANALYSIS OF A LOCAL AREA PROPOSED FOR REDEVELOPMENT.

recommended that rents as high as practical be permitted in this area on condition that the corporation maintain as a part of the enterprise a section of low rent housing with accommodations for perhaps 20 per cent of the total families.

In general, we must then proceed on the basis of a reassignment and rearrangement of public space, studied in relation to wider possibilities for the reassignment and rearrangement of private property and private uses of property. In a sense, these wider possibilities are the real contribution of urban redevelopment procedure. The range of possibilities is widened by a difference in the technique of planning.

This is something which cannot be written into law. Those who have criticized the New York Urban Redevelopment Law of 1941 on the ground that the advantages offered are inadequate have missed the point that the great advantages offered are not in the form of subsidies but in opportunities for imaginative ingenuity in reducing the wastes which

have been the result of outworn procedures in finance, in taxation, in law, in property administration, and in planning and construction—and the even greater wastes due to lack of co-ordination between these fields.

For example, there is no need to argue the point that, in spite of recent reforms, our mortgage system is still antiquated and burdensome and that our methods of foreclosure are scandalously expensive. In our effort to correct abuses, we seem too frequently to have sought merely the restoration of vigor to the institution of the mortgage, rather than to have attempted to establish better co-ordination between our system of long-term finance and our systems of taxation, law and property administration.

The type of co-ordination needed may be illustrated by a study of a particular problem in urban redevelopment; namely, a section of the densely populated Borough of Manhattan in New York City. This is a problem which has been advanced through the preliminary stage only, by the architectural office of the writer. For clarity in presentation we may assume, on the one hand, that contacts have been maintained with the city planning commission and, on the other, that the requisite proportion of the ownership and mortgage interests has consented to the preparation of definite proposals and to the formation of an urban redevelopment corporation to carry out the program.

The outstanding public improvement which we shall make the purpose of our urban redevelopment project will be an express crossway connecting the point at which Park Avenue ceases to be a desirable residential street with the East River Drive. (Figures III and IV). In recognizing the need for arterial connections at this point, it is our intent to put

even greater emphasis on the need for opening up the city, restoring the sense of spaciousness, and increasing the benefit of the waterfront by creating large open spaces leading to it.

The proposed crossway route has been selected as one of several possible strategic express crossways that have been suggested for Manhattan. East 96th Street is one hundred feet wide. There are many who claim that as now paved this street is an adequate arterial connection between upper Park Avenue, the 97th Street Transverse Road and the East River Drive. Although East 96th Street is one of the wider cross streets, it has not stimulated the promotion of modern apartments such as have been erected in East 79th Street, East 72nd Street and East 57th Street. The river frontage on East River Drive has not yet attracted new construction except for a public housing project and two public schools, although the East River Drive has been open for several years.

We point out that there are very high percentages of vacant buildings and vacant lots in the strip of blocks immediately to the north of East 96th Street. Also, there is a large percentage of blocks held in a single ownership, which is a survival of the day when this location was a center of utility company service stations. This area has reached a sufficient degree of blight to require a careful analysis of its present situation and a program for its redevelopment is timely.

The method for making an analysis<sup>8</sup> of

<sup>8</sup>See *Land Usage*, April-May, 1936 and June-July, 1936, (New York: Land Utilization Committee, N. Y. Building Congress); also A. C. Holden, "Facing Realities in Slum Clearance," *Architectural Record*, February, 1942; "A Basis for Procedure in Slum Clearance," *Architectural Record*, March, 1933; "Gabriel Over Block 326-A," *Architectural Forum*, January, 1935; also Oscar Fisher and Kenneth Fisk, "Application of Relative Factor Ratings in Land Evaluation," *Record and Guide*, 1934.

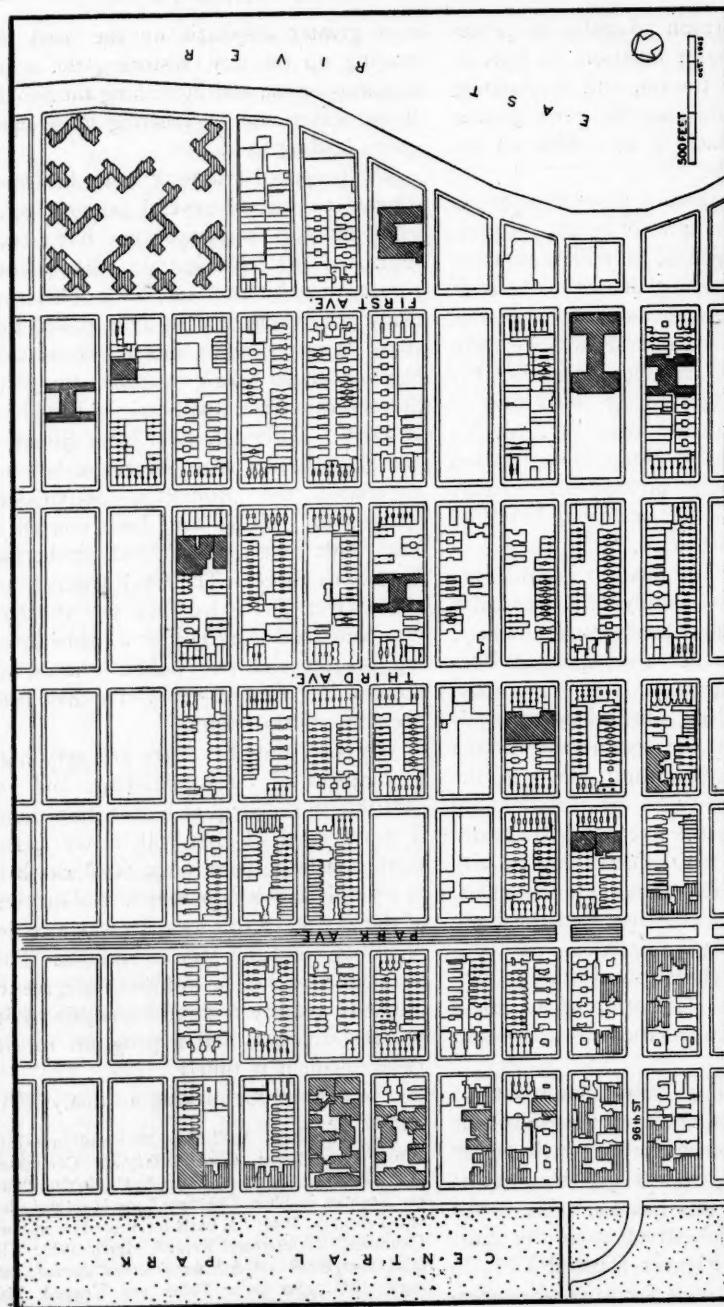


FIGURE III. AREA OF PROPOSED REDEVELOPMENT IN NEW YORK, EXTENDING FROM 96TH STREET TO 105TH STREET AND FROM FIFTH AVENUE TO THE EAST RIVER.

This figure shows the area as it now exists, consisting principally of "old law" tenements. Horizontal shading indicates desirable modern apartments or other private buildings. Vertical shading indicates schools, churches, and public or institutional structures. Diagonal shading indicates modern apartment buildings.

HAROLD M. LINDENSON & ASSOCIATES

properties prior to redevelopment has been discussed previously by the writer. Since space does not permit full treatment here, we shall assume the analysis to have been made. In the case under consideration it reveals mixed residential and commercial uses, with many of the properties showing such a degree of depreciation and obsolescence as to yield little or nothing above current taxes. A few properties show satisfactory money returns, largely due to more efficient management. There are no tall buildings and few substantial buildings in this area.

#### *VI. Public Policy with Respect to Planning*

Assume that the city planning commission has agreed to consider a proposal for replanning and redevelopment which will satisfy an outstanding public purpose and provide a vital express crossway and needed open spaces. The problem remaining to be solved becomes *the reassignment of public and private spaces and the distribution of the burdens and benefits of the change between public and private interests.*

At the present time we have a very definite obstacle to overcome in the limited ability of most municipalities to bear their share of the burden in a program which requires cooperation between the municipality carrying out public works and the enterprise which will be counted on to proceed with the construction of new buildings. There are at least two active groups who contend that a federal subsidy to aid land acquisition is an essential part of an urban redevelopment program. It is their claim that most cities are so near their debt limit that they are powerless to do their part.

The writer is not an advocate of direct federal subsidy. I have long maintained

that the proper channel of federal aid lies in the maintenance of a sound system of money and credit and the rebuilding of our present heterogeneous agencies into a coordinated system of long-term banking. For this reason, I have criticized proposals for federal subsidies in the form of questionable bond issues to raise funds which might be turned over to municipalities for buying up large sections of blighted areas for redevelopment. Proposals of this type have been advocated by both the Urban Land Institute, sponsored by the National Association of Real Estate Boards, and by the "Keynesian" group led by Prof. Alvin H. Hansen and Guy Greer. I would prefer direct federal grants to dubiously secured bond issues, provided the function served could be shown to be economically sound. Let the grants be utilized to create funds for the municipalities to buy back the open spaces needed and to convert these open spaces into modern facilities. Grants should be used solely for public purposes and applied in such a way as to restore strength to our financially sick municipalities. These are legally sound principles.

Let us apply these principles directly to the specific area which we are considering. Our plan calls for the fifteen per cent of the property now in private hands to be transferred to public use, and nine per cent of the lands now used for public purposes to be transferred to private use. Table I and Figure V illustrate the general redistribution of uses which is recommended for the project.

*Land Redistribution.* A diagrammatic summary of the redistribution of land in terms of public and private use is shown in Figure V. Table I indicates in terms of acres and percentages the shifts in use that the suggested redesign of the neighborhood indicates as desirable. It is ap-

parent that the net difference in properties reverting to public use is a mere eight acres. Assuming a minimum of \$3 per sq. ft. or approximately \$7,500 for a 25 ft.

the district should receive payments for capital facilities destroyed as well as for temporary interruption of existing uses during the transitional period.

In a sense, the growth of our cities has created a situation which is the reverse of the situation in the early days of the republic when there were huge areas of undeveloped lands in public ownership. To put such lands to effective use, it was necessary to transfer them into private hands. The general land office sold public lands to settlers at very low acreage rates. Town sites were reserved, surveyed, and lots sold off at public auction. Although sale prices were low, the sums realized were in the aggregate so large that for many years a large portion of the public revenues came from land sales.

FIGURE IV. COMPLETION OF THIRTY-TWO BLOCK REDEVELOPMENT FOR NEW YORK: AS DESCRIBED IN FIGURE III.

This figure shows the open-type of planning as advocated for the area of urban redevelopment which lies on either side of an express crossway.

lot, this would indicate a net worth of about \$1,000,000 as the amount which should be paid to the district by the city as compensation for the land. In addition,

Despite a faltering trial-and-error policy, the distribution of our public lands brought unquestioned benefit to the social and economic organism of the nation.



TABLE I. REASSIGNMENT OF LANDS: PUBLIC AND PRIVATE

EXISTING		TOTAL AREA OF 36 BLOCKS AND STREETS	REDEVELOPED	
ACRES	PER CENT		ACRES	PER CENT
134	100		134	100
50	37	AREA OF STREETS AND HIGHWAYS 35 acres or 26% unchanged from existing use. 1 acre or 1% public property changed to streets. 6 acres or 4% private property returned to public use.	42	31
0	0	AREA OF PARKS 7 acres or 5% streets converted to parks. 1 acre or 1% other public property converted to parks. 14 acres or 10% private property returned to public use.	22	16
11	8	OTHER PUBLIC PROPERTY Unchanged from existing use.	5	4
73	55	PRIVATE PROPERTY 2 acres or 2% unchanged from existing use. 51 acres or 38% private property pooled for reassignment of use. 8 acres or 6% streets pooled with private property. 4 acres or 3% other public property pooled with private property.	65	49

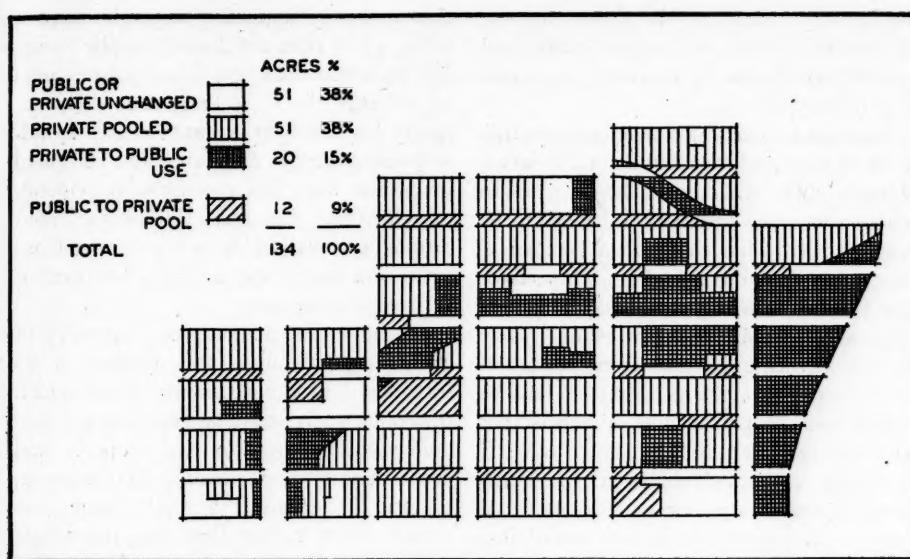


FIGURE V. A DIAGRAMMATIC SUMMARY OF THE REDISTRIBUTION OF LAND IN TERMS OF PUBLIC AND PRIVATE USE: PROPOSED AREA FOR REDEVELOPMENT, NEW YORK CITY.

Today, especially in our cities, there is need for a change in the proportion of lands required for public use and for private use. Changes are also required in uses to which lands in private ownership are applied. The federal government has recognized the change in trend. The re-assembly of public lands has to date taken place principally outside the cities. The need for forest conservation has been a leading purpose. Mineral and oil bearing lands have been designated as reserves. The federal government has extended aid to the states for the improvement needed through highway routes.

It is reasonable that the federal government should make grants to be distributed to the states on the basis of population to aid them to carry arterial highways and post roads through the densely populated sections of our cities. The effect of such aid should be directed toward increasing

the proportion of urban lands assigned to public purposes. It is logical that the federal government, which shared with the states in the proceeds derived from the distribution of public lands, should now share with the states a part of the cost of transferring land back into public use, and in creating the elbow room so greatly needed to reduce congestion in the cities.

If we expect to keep our confused tax situation from becoming more confused, great care must be taken to assure direct public benefit as a result of the expenditure of public funds.<sup>9</sup> It is important also that the appropriation should as nearly as possible represent a fair measurement of the public benefit which is created. It is equally important to direct the course of

<sup>9</sup>See Arthur C. Holden, "Effect of Taxes—Federal, State and Municipal—on Housing," *Empire State Architect*, October, 1943.

the activity which results from the improvement so that it generates additional benefits which can be measured in terms of private exchange.

There is a great difference between this point of view and the attitude of Professor Hansen and others of the Keynesian school who have stressed the benefit to be derived from what they call a compensatory policy of public spending. They advocate federal "loans" for the acquisition of large areas of blighted real estate. They do not advocate governmental operation but suggest that the property should be turned back to private use on terms that will "write down inflated land values." Not only is there doubt as to the likelihood of the repayment of governmental loans of this type but the end served is a direct subsidy for the private use of property. Such public purposes as may be served are indirect.

Many different types of subsidy have been suggested to aid the clearance of slums and blighted areas. Voters and taxpayers have been willing to place both advances of public credit and outright grants of public funds at the disposal of housing authorities. Even though properties of this type remain in public ownership, the direct benefit of the public expenditure is a private use of the housing which is enjoyed by those individuals who pay rents lower than the market. Of course there is an indirect public benefit which takes the form of improved social conditions but this benefit is not susceptible to accurate measurement.

#### *VII. Directional Control of Public Funds to Secure Maximum Benefit*

I do not at this point propose to argue the question of the necessity for the use of federal grants or advances of federal credits. What I desire to emphasize is

that a wisely applied grant will have a better effect than a dubiously applied loan. Let us admit that our municipalities may be so near the debt limit that their capacity for self-help is limited. Let us admit temporarily at least that blighted properties have few resources in evidence on which they can draw. Under such conditions it is reasonable to expect that Congress will find a way to aid a program of urban redevelopment.

I believe that the success of a policy of grants depends upon the wisdom of its direction and the economic effect which it produces. It must be remembered that policy with respect to real property and construction means dealing in long-term finance. Therefore, the long-range economic effect rather than the immediate effect, must be the guiding factor. Public money may justly be expended to secure a public benefit such as space which returns to public use or new public facilities which are created and put to public use. The public expenditure should measure the value of the public advantages created in terms of the long-range use of the facilities.

Even though we concede the validity of a federal grant to measure a change in the proportion of lands assigned to public or private use, care must be exercised not to make the cities directly beholden to the federal government. We must remember that cities are corporate subdivisions created and chartered by the states and responsible to the states. Federal monies for urban redevelopment should be apportioned *through* the states and distributed by the states to municipalities in conformity with both federal and state policy.

In considering the economic effect of the use of public money to measure the value of property transferred from private to public use, we must not be satisfied merely by the assurance that the prop-

erties acquired will be put to bona fide public use. We must see that payments are applied in such a way as to liberate activities on the part of individuals and groups which will, *as directly as possible*, benefit the social and economic well-being of the community.

Figure V shows the recommended redistribution of space between public and private use. First, let us consider the size of the payment needed to compensate existing property owners for rights transferred to the public. Then, assuming that compensation is made in the usual way, consider whether or not the public is denied benefits from the transaction that it ought to receive.

Apparently awards for expropriation have not been assumed to carry with them the obligation to utilize these payments to restore to private property the value that has been taken away. For example, twenty acres—or fifteen per cent—of the total area in Figure V are indicated for transfer from private to public use. This is shown by heavy cross-hatching. If an appraisal is made on the basis of the value of property taken away and if unconditional payment is made to the individual owner without attempting to relate either value or payments to what is taking place, the result is not only to deprive the community of a portion of its physical assets but to charge the cost of this deprivation against the community. We used to think that public improvements could not be made unless the property remaining in private ownership could earn enough to pay off the acquisition cost of public space over a period of years through assessments for benefit.

When it was found that the small areas directly benefited could not pay full costs, public policy suggested the development of methods for broadening the distribution of costs. In New York the practice

was sometimes followed of assessing one-third of cost against the "local improvement district," one-third against the borough, and one-third against the city as a whole. Of course the tendency is to shift as much of the burden as possible to the larger area. Local areas are always eager to claim that the lion's share of the benefit goes to the community as a whole. The recent demand for financial aid from the federal government is a part of this tendency to shift the burden of improvement.

What takes place when money is paid in compensation for property taken for a public purpose? Figure V indicates that certain specific owners (represented by the darker shading on the figure) are singled out for the special privilege of having their existing property rights transformed into liquid buying power. These few owners are at complete liberty to transfer this buying power away from the district upon which their property interest has been dependent heretofore. But this free buying power, which may be used by the beneficiaries to demand commodities or luxuries, or real property located elsewhere, is charged back against the community except insofar as the community is able to shift the burden to a larger area.

Let us now suppose that a directive principle is applied to the compensation paid for the transfer of property from private to public use. The awards for property taken, instead of being made specifically to those particular owners who are deprived of their existing property rights, may be made to the community as a whole *in trust* for those who suffer deprivation. When an urban redevelopment corporation has been authorized to act for the neighborhood, this cash payment is received by the corporation and becomes the cash working capital of the district as a whole. It serves to weld it into an entity

and gives the district the power of initiative which it had previously lacked. The owners, whose former interests are shown by the dark shading, become proportionate owners in the whole joint enterprise.

Let us conclude, therefore, that it is not good public policy to permit a few existing owners to cut themselves off from the process of transforming a blighted area, consisting of obsolete individual properties, into an up-to-date district planned for the coordination of both individual and group interests. In fact, were these particular owners, whose specific properties are to be utilized for the route of the proposed express crossway, to be given cash, then it would follow that those owners who remain in possession of their properties must be compensated for such partial damages as they are subjected to in the event that they are deprived of a portion of their existing rights. Referring again to Figure V: wherever diagonal shading is indicated, the plan calls for the transfer of public property to private use. Where streets are returned to private use, abutting property is deprived of its existing rights of access. It is possible to translate this into a monetary equivalent for estimated damages. If the award is made directly to each property owner, that property owner may take the award and spend it for purposes other than the restoration of his property if he sees fit.

American courts have, however, imposed a directive restriction upon awards for expropriation. They have established the principle that awards may be offset by assessments for benefit. Hence, a property owner receiving an award for damages may not withdraw it until the assessment for benefit has been determined. Assessments for benefit have in specific cases been greater than awards for damages. In such cases injustices have often been im-

posed because of inability of the property holder to realize the benefit due to inadequate financial resources.

The principle of permitting the offsetting of damages against benefits is an important one. Through redefinition of bankruptcy, making group proceedings applicable to blighted areas under conditions established by Congress, our municipalities could require the use of awards for the improvement of blighted districts to be held in trust during such period of transition as may be required for the redistribution of property rights. Such a policy would establish the principle that the district having become blighted, owners in the district might be restrained from drawing further capital out of the district. Owners would, however, be permitted to enjoy the usufruct of their property in the form of an equivalent net use or compensation for *use only* during the period of replanning and redevelopment.

In another paper we shall go further into the details and principles involved in the approach to district replanning through coordinated action by existing property owners and mortgagees. At this point we desire to stress the great value to both public and private interests of restricting the application of all expenditure for land acquisition to the improvement of the blighted district. It should be evident that group planning and group handling of the redistribution of interests will permit great economies in redevelopment costs. It will also materially increase the ability of the locality to bear its proportionate share of these reduced costs. At the same time it will assure the application of all of the public funds to the improvement of the district and prevent the dissipation of that portion of public funds which is used to measure the value of lands returning to public use.

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## Reports and Comments

### Excess Profits Tax Relief for the Electric Utilities Under Section 722 of the Internal Revenue Code

M R. Justice Holmes was fond of saying that "taxes are what we pay for civilized society."<sup>1</sup> Certainly, excess profits taxes are a price we are paying to defend civilized society.

Any tax imposed at a high rate must be carefully surrounded by exceptions, qualifications and relief provisions to take care of the special and unusual cases if the tax is to work out fairly and equitably.<sup>2</sup> Excess profits taxes particularly call for relief provisions both because of the extremely high rates and also because of the inherent difficulties of finding satisfactory, general yardsticks for measuring "normal profits."<sup>3</sup>

Section 722 is one of the most far-reaching relief provisions which has ever found its way into the revenue laws.<sup>4</sup> It is born

of a desire to do equity among taxpayers. Congress has designated the 4 years, 1936 through 1939, as its measuring rod for normal profits for purposes of the earnings credit. The purpose of Section 722 is to grant additional credits to taxpayers whose 1936-to-1939 earnings do not provide a fair measuring rod of normal earnings and, in consequence, are subjected to excessive and discriminatory excess profits taxes.

The years 1936 to 1939, taken as a whole, were years of moderate prosperity. The first part of 1937 was a very good period for business generally, a large part of 1938 was a poor period; the other two years, 1936 and 1939, were moderately good years. These 48 months were intended to cover the length of a normal profits cycle for business as a whole.

A company entitled to use the average earnings method may obtain relief under Section 722 if it can show that its tax is "excessive and discriminatory" and that its base period net earnings do not adequately reflect its normal earnings for one or more of five reasons: (1) unusual physical interruptions of normal operations during the base years; (2) unusual temporary economic circumstances; (3) variations during the base period in the profits cycle in the taxpayer's industry from the cycle for industry generally; (4) changes in the character of the taxpayer's business or the commencement of business; (5) other causes of inadequate earnings consistent with the general pattern of Section 722. I propose to consider these five major categories of relief under Section 722 in relation to the power and light industry.

<sup>1</sup> *Compañía de Tabacos v. Collector*, 275 U.S. 87 (1927), Holmes J., dissenting, p. 100. A secretary to Justice Holmes, upon exclaiming "Don't you hate to pay taxes!" was met by Holmes' response, "No, young feller. I like to pay taxes: with them I buy civilization." Frankfurter, *Mr. Justice Holmes and the Supreme Court* (Cambridge: Harvard University Press, 1938), p. 42.

<sup>2</sup> The demand for simplicity in our tax laws, at least insofar as it is applied to taxes on business, is largely misguided. Our economic life is so complicated, business mechanisms and practices are so diversified, that only through special and elaborate relief provisions is it possible to avoid hardships and to approximate equity among taxpayers.

<sup>3</sup> The present excess profits tax adopts two yardsticks for "normal profits": (1) 95% of the 1936-1939 average earnings of the corporation; or (2) 5% to 8% of the corporation's invested capital. The taxpayer obtains the benefit of the higher of the two credits. During World War I only the invested capital method was used. Cf., Kenneth J. Curran, *Excess Profits Taxation* (Washington: American Council on Public Affairs, 1943), ch. vi.

<sup>4</sup> For general discussions of Section 722, see James K. Polk, "Excess Profits Tax Relief," *Taxes: The Tax Magazine*, August, 1943, p. 432; Merle H. Miller, "Relief Provisions of the New Excess Profits

Tax Act," *op. cit.*, April, 1943, p. 195; Paul D. Seghers, "Excess Profits Tax Relief Claims Under Section 722," *The Journal of Accountancy*, August, 1943, p. 96.

*I. Interruption or Diminution of Normal Production, Output or Operation During or Immediately Prior to Any of the Base Period Years*

This section deals with *physical events* which cause interruption or reduction of operations or output. The events must be "unusual and peculiar" in the experience of the taxpayer.

What types of physical events occurred during 1936 and 1939 to interrupt or reduce normal electric utility operations? Fires, explosions, hurricanes, lightning, unusual storms—these are typical of the type of occurrence encompassed by the first category of relief. An exceptionally dry season which reduced the output of a hydro-electric plant and made it necessary to resort to a standby steam plant would fall in this category. Likewise, in the case of companies which buy power from others, if casualties struck the generating plant or facilities of the taxpayer's power-supplier during the base period, a foundation might be laid for a Section 722 application.

Moreover, throughout a consideration of the application of Section 722 to the electric light and power industry, it is important to bear in mind that the industry is essentially a service industry depending for its sales upon the requirements of the industrial, commercial and domestic community. As a result, electric light and power consumption may be interrupted either by events directly affecting the industry's own production, or indirectly through a curtailment of the demand for electricity by reason of fires, floods, lightning storms or other casualties which strike large industrial users or the community generally.

Having found a physical event which interrupted normal output or operations, or which increased costs, the taxpayer must show that the event was "unusual and peculiar." A representative period in the taxpayer's experience should be taken—perhaps four or five years before the disrupting occurrence and several years thereafter—and it must be demonstrated that no events of comparable character or severity regularly occurred.

The event causing reduced production or operations need not have occurred during the base period. The statute, at this point,

refers to events occurring "either immediately prior to, or during" the base period.<sup>5</sup> How far back may one go to find an event "immediately prior to" January 1, 1936? The illustrations given in the Senate Finance Committee report appear to warrant considering an event in 1934.<sup>6</sup> In other words, this is a flexible term. An event occurring during a reasonable period prior to 1936 may be sufficient, provided its effect on the base period years can be established.

*II. Business of the Taxpayer Depressed During the Base Period Because of Temporary Economic Circumstances Unusual to the Taxpayer*

The second category of relief under Section 722 enters into the field of *economic events*, whereas the first category relates to *physical events*. It relates to temporary depressions, either in the taxpayer's particular business or in the industry generally, because of temporary and unusual economic events or circumstances.

This provision may be illustrated by the case of a company which lost an important source of power supply during the base period because its power-supplier had expanded its own business. The company proceeded to erect an auxiliary plant to provide for its needs. In the meantime, it was obliged to obtain the required power from more expensive sources. Or the company may have been disposing of its own excess power to another company which erected its own plant during the base period. For some months during the base period it thereby lost important revenues until it was able to find a new outlet for the excess power. Such events would appear to be unusual economic circumstances which depressed the business and made the base period an inadequate yardstick for measuring the company's normal earnings.

Rate reductions may be another type of economic event which may warrant relief under this subsection of 722. It is often asserted that rate reductions do not neces-

<sup>5</sup> Section 722 (b) (1).

<sup>6</sup> Report of the Senate Committee on Finance, H. R. 7378, Rep. No. 1683, 77th Cong. 2nd Sess., p. 200.

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sarily mean lower aggregate profits; that sales of electricity tend to increase in volume, which offsets the effects of lowered rates.<sup>7</sup> Without engaging in a discussion of this controversy, it is important to point out the possible applicability of Section 722 to such a situation. One thing seems clear—if a company is to recapture the unit profit lost through a rate reduction by increased sales, it is unlikely to achieve that result at once. Necessarily, there will be a lag for promotion, for sales of appliances, for changes in customers' habits, for the attraction of new industrial customers by lowered rates, etc. This period of readjustment, as a result of a rate reduction, would thus appear to be a temporary economic circumstance which depressed the taxpayer's business and which warrants relief under Section 722.

*Methods of Reconstructing Base Period Earnings in Cases of Physical Interruptions of Operations or Temporary Depressing Economic Circumstances.* Once a company has found a physical or economic event which makes its base period earnings inadequate and which results in an excessive or discriminatory tax, the job is by no means completed. It still has one important step to take before it can qualify for relief under Section 722. It must establish, to use the words of the statute, "what would be a fair and just amount representing normal earnings."<sup>8</sup> The company's earnings must be reconstructed by eliminating the effects of the physical or economic events which disturbed normal operations. For this purpose, the company's experience in territories unaffected by the disturbing events, its sales and profits in earlier or later "normal" years, and the experience of either the industry generally or of other companies operating in comparable areas may be utilized.

<sup>7</sup> See John M. Bryant and Raymond R. Herrmann, *Elements of Utility Rate Determination* (New York: McGraw-Hill Company, Inc., 1940), p. 236.

<sup>8</sup> Section 722 (a).

### *III. Depression During the Base Period Because the Profits Cycle in the Taxpayer's Industry did not Coincide with the Profits Cycle of Business Generally*

I intend to pass over this extremely interesting and widely discussed provision<sup>9</sup> with only a word or two because, in general, I do not believe that it has any important application to the electric light and power industry. Unlike the categories of relief discussed up to now, this variant cycle provision relates solely to economic facts in the industry generally; it does not relate to developments merely in the particular taxpayer's business. My examination of the statistics of production, sales of electricity and the earnings of the industry in relation to the business and profits cycle of industry generally has led me to believe that the profits cycle in the electric industry compared not unfavorably with that of industry generally during the base period.<sup>10</sup> Indeed, it is difficult to see how the result could be otherwise in an industry which, day by day, provides the power that turns the wheels of national production and lights the offices and stores in which the country's commerce is carried on and the homes in which our people live. It is because sales of electricity are a mirror of the economic life of the community that such sales are often used as a component of general business indices. Accordingly, the variant business cycle provision of Section 722 does not seem to me to afford a fruitful source of relief for the electric light and power industry.

### *IV. Changes in Character of the Taxpayer's Business or a Commencement of Business During or Immediately Prior To Base Period with Normal Operations Inadequately Reflected During the Base Period*

Up to now, we have been discussing *sub-normal production or output, or depressed*

<sup>9</sup> See, e.g., Frank E. Seidman. "Excess Profits Tax Relief in 'Variant Profits Cycle' Cases," *Taxes: The Tax Magazine*, August, 1943, p. 422.

<sup>10</sup> See "A Nation-Wide Survey of Public Utility Progress," *Moody's Public Utilities* (1942), p. a-1, et seq.; "The Electric Light and Power Industry in the United States (1942)," *Edison Electric Institute Statistical Bul.* 10.

*business*, which made the base years an inadequate measure of normal profits. Sub-section 4 of the statute deals with another problem—*changes in the character of the business* with the result that the base period business is *dissimilar in character* from the current business; hence, the earnings of the business during the base period are unrepresentative of the current business.

This term, "change in the character of the business," is defined in greater detail by the statute than any of the other Section 722 relief categories. The statute declares that the term includes the following:<sup>11</sup> (a) A change in the operation or management of the business. (b) A difference in the products or services furnished. (c) A difference in the capacity for production or operation. (d) A difference in the ratio of non-borrowed capital to total capital. (e) The acquisition before January 1, 1940, of the assets of a competitor, thereby diminishing or eliminating competition. This is a provision of wide scope and I believe of great importance to many companies in the electric light and power industry.

Just as in the case of physical interruptions in operation or production, changes in the character of the business may have occurred either during, or *immediately prior* to the base period. The provision goes one step further. Even if the change in the character of the business occurred after December 31, 1939, the taxpayer may still obtain relief provided the company was committed to the change before that date.

Of course, the change itself will not suffice unless it can be shown that the change resulted in lower costs, larger revenues, or higher profits. Also, it must be shown that the change occurred well after the base period began or that its base period earnings are not fairly representative of the business after the change had taken place because of the time lag required to reflect the effects of the change in the company's business.

Some changes which have occurred in the industry which may lay a foundation for application of Section 722 are enumerated in the following paragraphs:

(1) A change in the character of power generation, e.g., from steam to hydro-electric power gen-

eration, being made either by the company or by its source of power supply.

(2) The building or acquisition of the company's own power generation sources in cases where it bought power previously; or a change in its source of purchased power. This latter factor may be of considerable importance to companies in the southeastern area which now purchase power from the T.V.A.

(3) Technical changes or improvements in boilers, generators, substations, or other equipment.

(4) Improvements in methods of operation of power plants, lines, etc., such as increases in primary voltage or transmission voltage, or changes in current from direct to alternating.

(5) A change in the type of fuel used for power generation.

(6) Changes in commercial management such as substitution of central billing, a shift from hand billing to machine billing, or a change in sales of appliances from direct merchandising to dealer operation.

(7) The establishment of a new management which adopted new operating, promotional or rate policies and which resulted in increased earnings.

A word should be said about one important change in management—which has taken place in the industry since 1935. I refer to the striking changes made in the relations between service companies and operating companies in utility systems. For example, in the Associated Gas and Electric System, operating companies for many years paid excessively high prices for engineering, financial, management, corporate, and other services rendered by the so-called Hopson Companies.<sup>12</sup> Indeed, they often paid for services they did not get—and received services they did not need.<sup>13</sup> Under the regulations of the Securities and Exchange Commission and of some state regulatory commissions, that situation has been largely, if not entirely, cleaned up in the industry.<sup>14</sup> If a change in service company policies was made which did not adequately reflect the lowered net costs to the company by January 1, 1936, it may have a basis for

<sup>11</sup> See *Matter of New York State Electric & Gas Corporation v. N. Y. Public Service Commission*, Case No. 9587, Dec. 30, 1940, p. 162, *et seq.*

<sup>12</sup> *Ibid.*

<sup>13</sup> See the rules issued by the Securities and Exchange Commission for the regulation of service company charges under the Public Utility Holding Company Act of 1935, as amended; Rule U-87, *et seq.*

<sup>14</sup> Section 722 (b) (4).

relief under Section 722, attributable to a change in the operation or management of its business.

*Difference in the Products or Services Furnished.* In general, of course, electric light and power companies have not changed the basic product they furnish, namely, electricity. However, there are several related services furnished by many companies in the industry in which there may have been important changes. A company may have given up or may have entered for the first time into any one of the following businesses: gas, street railway, water, or ice.

*Differences in the Capacity for Production or Operation.* Changes which have occurred in the industry with respect to capacity for production or operation can be summarized thus: (1) Expansion of power generation facilities, either by the company itself or by the source from which it buys power. (2) Extension of transmission facilities to new areas or a substantial increase in facilities in old areas. (3) Availability of surplus or dump power.

*Difference in Ratio of Non-borrowed Capital to Total Capital.* This is a provision which may be of special interest to utilities. As a result of the action of the Securities and Exchange Commission—and for other reasons—many utility companies now have a smaller ratio of borrowed to total capital than in days gone by.<sup>15</sup>

If a company reduced its debt or replaced it with stock during the years 1936 to 1939, there may have been a basis for relief under this provision. Earnings during the base years would have been lower than for comparable current operations, since interest deductions theretofore available would have

<sup>15</sup> Although it was not until its decision in the *El Paso Electric Company* case (8 S. E. C. Rep. 366), promulgated on December 8, 1940, that the Securities and Exchange Commission definitely announced its policy that, in connection with refinancings of operating utility companies, it would require "a reduction of the ratio of debt to net property and of debt to total capitalization to a reasonable level" (8 S. E. C. Rep., at p. 378), nevertheless, its decisions, at least as far back as 1937, had clearly indicated its views that a higher ratio of common stocks to total capitalization than prevailed in many utility systems was desirable (see cases cited in Appendix to *El Paso* decision, 8 S. E. C. Rep., at p. 383).

been eliminated by the change. The later in the base period that such a change occurred the greater the reduction in base period earnings.<sup>16</sup>

*Acquisition of Assets of a Competitor before January 1, 1940.* This situation (where a company acquired the assets of a competitor before January 1, 1940 and thus diminished or eliminated the competition) is not a general one in a non-competitive industry; but it does happen occasionally. For example, dual electric light systems existed for many years in Erie, Pennsylvania. That competitive situation was eliminated recently by the acquisition of the Erie County Electric Company by Pennsylvania Electric Company.

*Other Changes.* The provision granting relief in cases of a change in character or the commencement of a business is not limited to the five categories discussed above. The statute refers broadly to situations in which the taxpayer "commenced business or changed the character of the business and the average base period net income does not reflect the normal operations for the entire base period of the business."<sup>17</sup> The five categories referred to are specific provisions which (the statute declares) the term "change in the character of the business" includes but the enumeration is not exclusive.

#### *Method of Reconstructing Base Period Earnings in Cases of Change in the Character of the Business*

After a company has established that a substantial, essential change in the character of its business (as defined by Section 722) which resulted in subnormal earnings occurred during the base period, it is confronted with the problem: How are the base period earnings to be reconstructed?

<sup>16</sup> If the increase in equity capital occurred after December 31, 1939, the taxpayer does not fall within the provision; and even if the company had been committed to such a change prior to that date, it probably will obtain no relief under Section 722. But in fact the company does obtain an additional earnings credit under the statute—not by reason of Section 722 but because taxpayers obtain an additional earnings credit of 8% of the amount of capital additions made after December 31, 1939.

<sup>17</sup> Section 722 (b) (4).

*Two-Year Push-Back Provision.* All such changes are divided into two categories, depending upon whether the business, by the end of the base period, reached the earnings level it would have reached had the change taken place two years earlier. If that earnings level was reached, the entire base period earnings must be reconstructed by reference to such earnings level. If not, the base period earnings are to be reconstructed on the assumption that the change took place two years prior to the actual event.

(1) *Cases in Which the Base Period Earnings Reached the Push-Back Level.* This point deserves illustration. Suppose that on January 1, 1937, a company put into operation a new transmission line and a new substation in a residential or rural area never before served. For months thereafter it engaged in extensive promotion work, both to obtain new customers and to increase their consumption by the use of electrical appliances. During this period of development the company's selling costs were excessive and its sales of electricity low although gradually rising. By January 1, 1939, earnings in the area had reached a more-or-less stable level; they had gone beyond the pioneering stage and had reached a point of normal operations.

The base period year 1939 would thus constitute a full year of normal operations after the change had taken place. That year's operations would then become the yardstick for measuring the company's normal earnings after the change had been completed. It would thus use the 1939 earnings as the constructive base period earnings for all 4 base years after, of course, adjustments were made for general economic differences between 1939 and the preceding 3 base years, and for any other special factors affecting the earnings of the 3 earlier years.

(2) *Cases in Which the Base Period Earnings Did Not Reach the Push-Back Level.* Now let us turn to situations in which the base period earnings did not reach the level which would have been attained had the change been made two years prior to the actual date of change. Take the same illustration used before. How do we proceed now?

We first apply the two-year push-back provision; that is, we are permitted to re-

construct base period earnings on the assumption that in fact the change in the character of the business occurred, not on January 1, 1937, but on January 1, 1935.

This means that, to reflect the effects of the new development, we take the company's experience with the new development in 1937 and apply that year's results to 1935—a year of no special interest in this matter. Then we graft the company's 1938 experience onto the actual 1936 earnings and its 1939 experience onto 1937 earnings. We must again make adjustments for other general economic or special differences between 1938 on the one hand and 1936 on the other—and likewise, between 1939 and 1937.

What is to be done about 1938 and 1939? To find the effects of the development upon those years, after they have been pushed back, would seem to require a consideration of the company's experience in 1940 and 1941. But the statute provides that we may not consider events and conditions after December 31, 1939 (with exceptions not here relevant) in building up constructive average base period income. Of course, in general that makes good sense, since earnings of the years after 1939 were greatly affected by the war and by our national defense program. How, then, are we to measure what would have happened in the business in 1938 and 1939 if the change had occurred in 1935 instead of 1937? I think the answer is that, while a company may not seek relief under Section 722 for events occurring after 1939, it may in fact look to the actual growth of the new development in 1940 and 1941 in reconstructing earnings but it must discount that growth for the events and conditions in 1940 and 1941 attributable to the war and to national defense expansion.<sup>18</sup> Throughout, the previous experience of the taxpayer and the experience of other utilities engaging in comparable developments in peace-time may be considered.<sup>19</sup>

<sup>18</sup> For the views of Randolph E. Paul, formerly General Counsel to the Treasury, see his address on Section 722, made on May 10, 1943, to the New York Society of Certified Public Accountants. C.C.H. 1944 Standard Federal Tax Service, Par. 5142 E. 05 *et seq.*

<sup>19</sup> Section 722 contains a provision which is designed to prevent a duplication of credits. If a company in 1940 and 1941 had issued \$1,000,000 worth

(Continued on page 155)

*V. "Inadequate Standard of Normal Earnings" Provision*

This is the catch-all provision. Its language is broad; its qualifying provisions point to the purposes, principles and limitations of the provision generally. By its very nature this provision covers a great variety of situations. It may be used either standing alone or as added support for a claim which may or may not fall precisely within one of the more specific provisions.

*New Industries in the Area Served and New Methods of Operation.* Some situations may be mentioned in the electric light and power industry. Suppose that prior to 1936 there were no chemical plants in a particular area and that during the next 3 or 4 years one of the towns in the area became a thriving chemical town. A new industry has thus come to the area. The earnings for the earlier part of the base period do not adequately reflect the expanding power sales; and during the latter part of the base period the business attributable to this change may not have reached anything like current proportions. Such a development may qualify as a change in the character of the business under subsection 4, perhaps under the general language of that subsection, if not under any of the five enumerated categories. The company may argue that it was not in the business of serving chemical plants before this change and, of course, if it had to expand its capacity for operation or production, by express definition there would be a change in the character of the business. But in the absence of such an expansion it would appear that this change

in the area served if it did not constitute a change in the character of the business is so significant a factor in making its 1936-to-1939 earnings unrepresentative of its normal earnings, after the chemical plants developed, as to bring the change within the catch-all provision. The same might be said of an important change in the method of operating an industry in an area which resulted in increased sales, such as the conversion of industrial plants to central station service.

*Termination of Appliance Sales and of Promotion.* There is one other specific matter to which I should like to refer under the catch-all provision. During the years 1936 to 1939 many companies sold electrical appliances and many spent substantial sums in promoting the sales and use of these appliances. At least some companies in the industry made expenditures for this sales and promotion work substantially in excess of any return during the base period in receipts from sales of appliances or of additional power. By the end of 1941, and certainly by 1942, appliance sales had dropped to a minimum and promotional expenditures had largely ceased. Also, the company may have granted free wiring subsidies in order to develop the electric water heating business.

Now, note the results. The company spent money on promotion and sales of appliances and on subsidies, primarily to obtain increased power sales not only in 1936, 1937, 1938 and 1939, but for the years following. These expenditures decreased base period earnings; the company made no comparable expenditures during current years and yet its sales of electricity and income have increased during current years because of the expenditures made in the earlier years.

This change may not precisely fit the language of Section 722 (4) but the catch-all provision may provide the answer. That provision may perhaps permit the company to increase its base period earnings by allocating a part of the net costs of appliance sales and attendant promotional expenses to the post-1939 period. Perhaps it would be justified in spreading these costs over an

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of new capital stock in order to complete the construction of its facilities in a new area, in computing its earnings credit, without reference to Section 722, it would obtain an increased credit of 8% of this new capital, or \$80,000 (Section 713 (g)). In that case, the constructive earnings built up for 1938 and 1939, by reference to the 1940 and 1941 earnings, would in fact be in part attributable to new capital for which the company obtains a credit without reference to Section 722. To avoid this duplication, the regulations require the taxpayer to reduce the constructive average base period income for the years in question by 8% of the increased capital paid in after 1939.

average of the expected life of the appliances sold.<sup>20</sup>

<sup>20</sup> There are several other relief provisions in the excess profits tax law which are important—considered alone and in relation to Section 722. These are: (1) the 75% clause for the lowest base period year (Section 713 (e)). Under this provision the earnings for the poorest base year may be increased to 75% of the average earnings for the other 3 years, deficits being taken into account in the computation. (2) The growth provision (Section 713 (f)). If the earnings for the last half of the base period exceed those for the first half, you may increase the earnings of the last half by 50% of the excess. (3) Abnormal deductions during the base period. Section 711 (b) (1) contains a number of important provisions which provide for adding back abnormal deductions. Subdivisions (J) and (K) afford more or less general relief, within stated limitations, for deductions generally abnormal either in amount or as to class.

If base period earnings are reconstructed under Section 722, may the taxpayer also add the effects of the 75% provision for the lowest base period year, the growth provision, and abnormal deductions, or are the two types of relief mutually exclusive? The Treasury's answer is: "It depends." (Section 35.722-2(b) (1) and (3), Regulations 112). In a word, the Treasury has said that a taxpayer

### Conclusion

We have been dealing with a new piece of legislation which has broad purposes and is necessarily couched in general language. Because of its great fiscal importance both to industry and to the Treasury it is likely to be embroidered by many rulings and interpretations. The provisions for appeal to the tax court will also mean a host of judicial decisions. Years will elapse before anything like the definite contours of Section 722 can be painted. All we can do now is to sketch the provision in broad outline and to point arrows to a few significant factors in the electric light and power industry.

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may not use both sets of relief provisions as a matter of right, but in a proper case the Treasury will allow both types of relief.

## Post-War Planning for Yorkville: IV. Toward Post-War Housing

**T**O DAY, in a war economy, plans are being made for the redevelopment of cities in the post-war world. These plans are of interest to diverse groups. Local and federal governmental agencies sponsoring various forms of urban rehabilitation, for example, must of necessity get essential data on "sore spots." In New York State, on the heels of the Urban Redevelopment Companies Law of 1943, banks and insurance companies having funds to invest in large-scale housing projects are interested in ob-

taining as much information as possible on appropriate areas for reconstruction. The owner of a building located in a slum or blighted area is anxious to know whether or not the proposed changes include his property. The family now living in a sub-standard house which is to be torn down asks: Into what other cheap accommodations can we move? Must we leave the neighborhood?

### Redevelopment in Yorkville

Just where should redevelopment occur in Yorkville (that section of Manhattan bounded by Central Park and the East River, and 63rd and 91st Streets)? The answer is east rather than west of Third Avenue. Substandard housing is concentrated in the

\* This article concludes a series of four studies which have been appearing in this *Journal*: The first (November, 1942 issue) analyzed land planning and zoning in Yorkville; the second (August, 1943 issue) discussed population; the third (November, 1943) dealt with housing in transition.

east area; high rental, elevator-equipped structures are in the west area. In the latter, according to the 1940 census, average monthly rentals were approximately \$150 in contrast to about \$35 in the east area. Not even the superficial observer would suggest that the Fifth Avenue residential structures which front on Central Park, with land values ranging from \$4,100 to \$5,000 per front foot, are candidates for demolition. Although land values are lower on Park and Madison Avenues—from \$2,400 to \$4,500—the generalization still holds. Residential buildings on the streets adjacent to these avenues are also of the high rental type. The majority of the families who live in these structures fall into the upper two-per-cent-of-the-income brackets in the United States.

New construction or remodeling in the west area can well be left to private initiative which seeks investment with the hope of good return. This type of housing must of necessity be restricted to those who can afford to pay high rentals. Thus, in all probability the west area of Yorkville will continue to be the gold coast of New York City. Immediately east of the gold coast, however, are three sore spots which are appropriate for housing redevelopment. Net returns from such a rehabilitation will be limited or will depend upon subsidy; results, however, will take the form of social dividends not only for the population re-housed but for the larger community.

### *Three Sections for Demolition in East Yorkville*

Specific sections for redevelopment are not always apparent to the casual observer. In the east area of Yorkville, for example, the foreign-born populations—constituted primarily of Germans, Czechs and Austrians—evidence the characteristics of cleanliness and thrift which are an inherent part of the social heritage of these people. As a result, their dwellings often appear less dilapidated than do structures of comparable age in other sections of New York City. It is essential, therefore, to give weight not only to observations but to a series of variables which measure the extent to which a section is in need of redevelopment and which indicate, in addition, whether or not such change is economically feasible.

On the bases of a number of such "meas-

uring rods" applied in the area of Yorkville located east of Third Avenue, it becomes apparent that three sections are especially in need of post-war "face lifting." One of these (Section A) including six blocks located between Third and York Avenues, and 69th and 71st Streets, offers interesting possibilities for a low rental housing project. The second, Section B, encompasses fifteen blocks located between Third and York Avenue, and 73rd and 78th Streets. In an effective post-war redevelopment program the characteristics of this area suggest that it would lend itself to either medium- or low-rental housing.

The third, Section C, embraces twenty blocks located between Third and East End Avenues, and 80th and 85th Streets. Within this area are many rooming houses attracting a floating population. In the years immediately preceding World War II some old-law tenements were remodeled into multi-family dwellings for higher income groups. In contrast, on the edge of this area (between 78th and 79th Streets and overlooking the East River) is City and Suburban Homes—a project designed, at the beginning of the 20th century, to provide accommodations for low income families. If Section C were reconstructed with either low- or medium-rental housing, there would no doubt be some dispersion of the concentrated German colony which at present gives the section much of its local color.

### *Recommendations of Other Studies*

As long ago as 1938 the Mayor's Committee on City Planning designated the major part of the eastern area of Yorkville as "appropriate for demolition and reconstruction."<sup>1</sup> In January of 1940 the City Planning Commission adopted as part of the Master Plan of the City of New York a map showing "Sections Containing Areas for Clearance, Replanning and Low Rent Housing." This was amended in 1942.<sup>2</sup> On

<sup>1</sup> Mayor's Committee on City Planning, *Yorkville Community Study*, New York City, 1938 (mimeographed).

<sup>2</sup> *City Planning Commission, Master Plan of Sections Showing Areas for Clearance, Replanning and Low Rent Housing Including Approved Housing Projects and a City-Wide Map Thereof*, City of New York, September 22, 1943.

TABLE I. NUMBER OF STRUCTURES, NUMBER AND AGE OF DWELLING UNITS, AND RANGE OF AVERAGE BLOCK RENTALS: YORKVILLE, 1940\*

(Three Sections Proposed for Clearance)

SECTION FOR CLEARANCE	BOUNDARIES		Number of Blocks	Number of Structures	Dwelling Units						Range of Average Block Rentals in Dollars
					Number		By Year Built in Percentage				
	Avenues	Streets			Total	Reporting	1930 to 1940	1920 to 1929	1900 to 1919	1899 or before	
A	Third and York	69 to 71	6	225	2666	1617	3.5	13.3	14.4	68.8	22 to 46
B	Third and York	73 to 78	15	622	6738	5275	8.8	3.3	34.6	53.3	22 to 47
C	Third and East End	80 to 85	20	932	8547	5898	0.8	1.1	18.9	79.2	22 to 40

\* Source: 16th Census of the United States, *Housing, Manhattan Borough, New York City, Block Statistics*, Washington, 1942.

the 1942 map the recommendations for Yorkville include only part of the territory designated for demolition by the Mayor's Committee in 1938. For the most part the block statistics of the 1940 Census substantiate both sets of conclusions.

Sections A, B and C—chosen in this study for demolition—are selected according to block statistics and are not identical with those proposed by either the Mayor's Committee or the City Planning Commission. All blocks in which recent remodeling or new construction has taken place, sufficient to result in high average rentals, were omitted from the three sections selected.

#### Significant Factors in Demolition

**Obsolescence.** In Yorkville, as in other parts of Manhattan, antiquity in tenement houses is synonymous with obsolescence and structures depreciate rapidly rather than mellow with the passage of time. In the largest of the three areas proposed for demolition (Section C), four-fifths of the dwelling units are in buildings which were constructed in 1899 or earlier. The total assessed value of the buildings in this section

is \$13,500,000, about one-fifth less than that of the land (Table II). In the next largest section (B), immediately south, more than half of the dwelling units are of this same ancient vintage. In this case the buildings and the land have approximately the same value, about \$11,000,000 each.

Dwelling units in relatively new structures, those built since 1920, are practically non-existent (less than two per cent) in Section C; in Sections A and B they are 17 and 12 per cent, respectively (Table I). In the case of the former this is consistent with the total assessed value of buildings, which is \$6,200,000 as compared with total land values of \$4,600,000.

**Low Rentals.** With the exception of the few subsidized governmental housing projects in New York City in 1940, low rentals connoted accommodation in old buildings and the accompanying lack of such facilities as private indoor toilets, central heat, and mechanical refrigeration.

In all three sections recommended for redevelopment there were blocks in which the average monthly rentals were as low as \$22. In none of them was the average above \$47. Specifically, in Section A three of the

six blocks had average rentals under \$30; in Section B seven of the fifteen blocks had average rentals of \$30 or less and only one block (in the southwest corner of the district) had an average rental as high as \$47; and in Section C six of the twenty blocks had similar rentals and an additional eleven blocks had average rentals between \$30 and \$35. (Chart 1)

*High Land Cost.* In general in Yorkville, as in Manhattan as a whole, the avenues running north and south have higher land values than do the east and west streets. Because the standard gridiron plan of street development results in long east-west blocks, the higher assessments applicable to frontage on the avenues affects a relatively small proportion of the total land area. In the three sections under discussion the range of assessed values along the avenues is from \$540 to \$1,400 in contrast to a range from \$360 to \$760 for the east and west streets. The upper limit of the land values for streets would be higher if the 100-foot east and west traffic arteries (72nd, 79th and 86th Streets) were included. However, in selecting the three sections for redevelopment, land bordering on these three streets was omitted. The combination of residential

and retail business in the newer structures fronting on them results in assessed valuations of land higher than some of those on the avenues.

Demolition followed by planned housing redevelopment for the low or middle income groups is practicable only if land can be assembled at not too great a cost. Governmentally subsidized housing projects in New York City, such as Williamsburg Houses (Brooklyn), assembled land at about \$4.13 a square foot, and Vladeck Houses (Manhattan) at about \$3.88.<sup>3</sup> There is no land in any of the three sections which is at present assessed as low as that used for Vladeck Houses. The cheapest land is in sections A and B, between York and First Avenues (Chart 2). In Section A this includes an area of only two blocks for which the average assessed values per square foot are \$4.71 and \$5.43. In Section B there are five blocks in which the average assessed values range from \$4.12 to \$5.19. When the average assessed valuations per square foot are computed for the three sec-

<sup>3</sup> New York City Housing Authority, *Seventh Annual Report*, 1940, pp. 8, 9.

TABLE II. ASSESSED VALUATIONS OF LAND AND BUILDINGS IN DOLLARS: YORKVILLE\*  
(Three Sections Proposed for Clearance)

SECTION FOR CLEARANCE	BOUNDARIES		Assessed Valuation in Dollars					
	Avenues	Streets	Range Per Front Foot <sup>a</sup>		Land <sup>b</sup>		Land and Buildings	
			Streets	Avenues	Total	Average Per Square Foot	Total	Per cent Tax Exempt
A	Third and York	69 to 71	360 to 760	540 to 1000	4,601,300	6.12	10,839,550	17.5
B	Third and York	73 to 78	360 to 580	460 to 1000	11,579,850	6.05	22,668,700	9.0
C	Third and East End	80 to 85	480 to 600	600 to 1400	16,452,950	6.39	29,936,850	9.6

\*Source: <sup>a</sup>Tentative Land Values Maps, City of New York, for fiscal year July 1, 1944-June 30, 1945; New York City Tax Department, February 1, 1944. <sup>b</sup>Tentative Assessed Valuations of Real Estate Indicated by Parcel Numbers: New York City Tax Department.

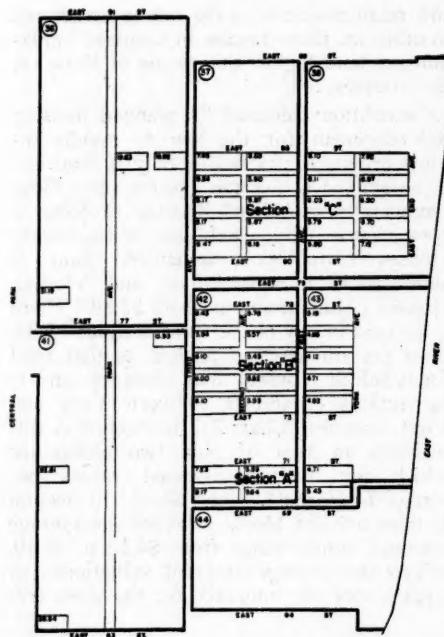


CHART 1. THE 1940 AVERAGE MONTHLY RENTALS IN DOLLARS PER DWELLING UNIT BY BLOCKS IN THREE SECTIONS PROPOSED FOR DEMOLITION AND REDEVELOPMENT, YORKVILLE.

*Source:* 16th Census of the United States, *Population and Housing, Statistics for Health Areas, New York City*;

*Code:* Number enclosed in circle in upper left-hand corner designates health area. Figure given where city block is indicated is the 1940 average monthly rental for dwelling units located in that block.

tions, they are \$6.12 for the six blocks in Section A, \$6.05 for the fifteen blocks in Section B, and \$6.39 for the twenty blocks in Section C. (Table II)

*Extent of Tax-Exempt Property.* Tax-exempt structures are generally not candidates for demolition. They usually include property owned and operated by philanthropic organizations as well as that belonging to governmental units. In Section A, 17.5 per cent of the property is tax exempt. Within its boundaries are the Lenox Hill Neighborhood House (which has long been carrying on a community betterment program), the Kips-Bay Yorkville Health Center (a family welfare agency) and a home for the aged. In Section B, 9 per cent of the property is tax exempt. This in-

cludes one-half dozen churches, a public school (P. S. 70), and a private school. In Section C, 9.6 per cent of the property is tax exempt. The community facilities include approximately six churches and two public schools, P. S. 190 on East 82nd Street and P. S. 96, a junior high school, on York Avenue. In general, considering the type of tax-exempt property in these three sections, a post-war redevelopment program might well incorporate them. For example, the New York City Master Plan has designated the two schools in Section C (P. S. 190 on East 82nd Street and P. S. 96, a junior high school on York Avenue) "for enlargement and remodeling in the post-war era" and two schools in Section A (P. S.

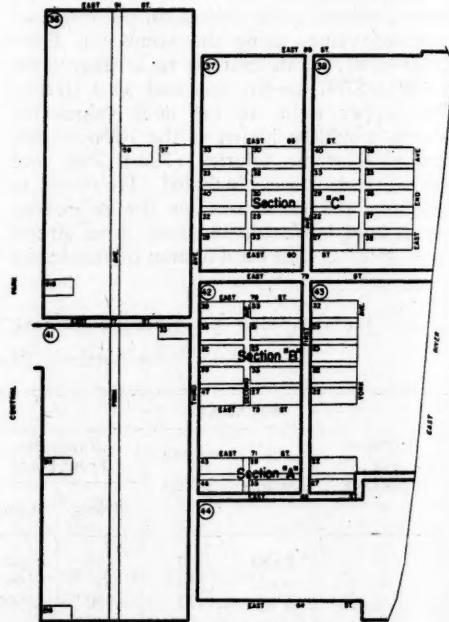


CHART 2. AVERAGE BLOCK ASSESSED VALUATIONS OF LAND IN DOLLARS PER SQUARE FOOT (JULY 1, 1944-JUNE 30, 1945): IN THREE SECTIONS PROPOSED FOR DEMOLITION AND REDEVELOPMENT, YORKVILLE.

*Source:* "Tentative Assessed Valuations of Real Estate, Indicated by Parcel Numbers," New York City Tax Department (fiscal year July 1, 1944-June 30, 1945).

*Code:* Number enclosed in circle in upper left-hand corner designates health area. Figure given where city block is indicated is the average assessed valuation of land in dollars per square foot. For purposes of comparison, the square foot assessed valuations of land in blocks having the lowest, highest and medium rentals are shown for each of the health areas west of Third Avenue.

183 on East 66th Street and Julia Richman High School for Girls on East 67th Street) as "in need of more adequate sites surrounding the buildings."

*Inadequate Zoning.* The zoning use regulations applicable to East Yorkville are obviously obsolete. They provide for much more business than the decreasing population can or does support. The height and land coverage restrictions permit family quarters without the minimum of light and air now considered necessary for healthful living. Nor is there relief through park and playground space, which in the three sections falls far below even the minimum in terms of population density. The inadequacies of these zoning regulations were presented in detail in the first of the four articles which constitute this study.

#### *Possible Types of Redevelopment*

Fact finding and the establishment of cause and effect relationships are the contribution of the social scientist. The decision as to what is to be done and its actual accomplishment rest with the planner, the legislator, the architect, and the financier. It is beyond the sphere of this analysis to determine the best possible redevelopment program for East Yorkville; however, it is well within the objectives of the study to point out *what can be done* to change the physical structure of the substandard sections of the community and to accommodate some of the families who are indigenous to the community but are unable to pay the peak rentals prevailing in the west area or those in the new high-cost construction in the east area.

Between 1920 and 1940 a continued movement away from East Yorkville occurred. In those two decades the community lost approximately 2,000 families, coming largely from the lower income group. Because of this exodus approximately 10,000 school children were lost to the section—a 54-per-cent decrease and the equivalent of the average enrollment in three city schools. If Yorkville wishes to stem this loss, some housing program must be evolved for the families that cannot afford to pay current commercial rentals.

*Low Rental, Subsidized Projects.* To date East Yorkville has no governmentally subsidized housing project. An analysis of rentals paid by a large majority of residents in that community indicates that many of them would qualify for accommodations in this type of structure. Average rentals per room for governmental housing projects in Manhattan, including utilities, are generally scheduled between six and seven dollars. In view of the relatively high land cost in the east area, rentals at a six- or seven-dollar level would necessitate a large subsidy. A precedent for such a subsidy for Yorkville exists in the establishment of other low-rental subsidized housing projects in Manhattan, such as East River Houses and Vla-deck Houses.<sup>4</sup> In none of these has the land cost been as low as \$1.50 a square foot, the original price set by the Authority for sites for subsidized low-rental housing projects.

*Philanthropic Housing.* Another partial solution to the housing problem for the low income group rests with the philanthropist. Lavanburg Homes, located in the lower East Side of Manhattan, is an outstanding example of what can be achieved with this type of financing when coupled with excellent management.<sup>5</sup> Here the problem is to find contributors, socially-minded individuals or groups of persons who are interested in the well-being of East Yorkville residents. It is just a possibility that among the residents of Park, Fifth and Madison Avenue areas active interest in such a project could be stimulated. The blocks immediately surrounding the Lenox Hill Neighborhood House (Section A) constitute an area well suited for such a redevelopment.

*A "Yorkville Village."* Since the recent favorable decision by the Court of Appeals of New York State on the Redevelopment

<sup>4</sup>According to the United States Housing Act of 1937, as amended, the annual federal subsidy "... shall in no case exceed a sum equal to the annual yield, at the going Federal rate of interest at the time such contract is made plus 1 per centum, upon the development or acquisition cost of the low-rent housing or slum-clearance project involved." *United States Code*, Title 42, ch. 8.

<sup>5</sup>Fred L. Lavanburg, *Practices and Experiences of Lavanburg Homes* (New York City: 1941).

Companies Law,<sup>6</sup> demolition and rebuilding of blighted or slum areas have become possible on a large scale. The post-war Stuyvesant Village, sponsored by the Metropolitan Insurance Company, to be located between 14th and 20th Streets in Manhattan and adjacent to the East River, is one such project. It is believed that this will contribute to the solution of the housing problem of the middle income groups. Rentals are expected to be about \$14 a room, a figure made possible through partial tax exemption.

Can this program be emulated in East Yorkville, i.e., should there be a "Yorkville Village" for the middle income group? Here again it must be pointed out that a possible deterring factor is relatively high land values. In the area designated for the Stuyvesant Village development, assessed land values range from \$240 to \$600 a front foot; the cheapest land in the east area of Yorkville is at the \$360 level.

More pertinent than the problem of land values, however, is the question of the desirability of the creation of a "Yorkville Village." Critics of Stuyvesant Village have pointed out that the result will be an increase of city congestion: 445 persons per net acre compared with the New York City Planning Commission's previous maximum of 416.<sup>7</sup> It has also been said that the thirteen-story apartment buildings and one-story garages constituting the periphery of the development will create a "walled town." Inside this wall only the inhabitants will use the private streets and parks. Another criticism is the lack of provision for school, library, health center, or indoor community facilities.

It has been charged that discrimination against tenants on the grounds of race, creed or color will exist. Since the project is to be financed by a large American insurance company with policy holders representing a cross-section of the American population, and since the city will subsidize the undertaking through tax exemption and

the donation of sixteen acres of city streets<sup>8</sup> now located within the area to be redeveloped, it is claimed that any type of discrimination is unjustifiable.

Planners for post-war redevelopment in East Yorkville undoubtedly will be influenced by these criticisms. However, it is quite evident that New York City families in the middle income levels (\$1,500-\$3,500) for the most part cannot afford to pay the commercial rentals for housing accommodations in the vicinity of Fifth, Park and even Lexington Avenues. It is equally true that these families will not live in the present low-rental accommodations in the east area of Yorkville which lack the essential conveniences. Where, then, will they live? Certainly not in Yorkville unless there are standard housing accommodations at moderate rentals. Perhaps the Urban Redevelopment Companies Law offers one partial solution.

*A "Housing Company" for East Yorkville.* It is just possible that in the post-war era persons with a semi-philanthropic point of view may be interested in the organization of an "East Yorkville Housing Company."<sup>9</sup> Beginning in 1926 New York State permitted the organization of limited dividend companies which provided housing between \$9 and \$12.50 a month per room.<sup>10</sup> The latter of these two figures is the one that has prevailed in Manhattan. In this borough the best known development, built under the 1926 New York State Housing Law, is Knickerbocker Village. Although erected in the slums of the lower east side it has definitely catered to families in the middle income brackets.

Although taxpayers have generally opposed tax exemption on housing accommodations for families who can afford to pay \$12.50 per room per month, nevertheless it has been demonstrated that standard housing units in Manhattan cannot be rented even at this figure without governmental subsidy.

<sup>6</sup> Committee on Housing, Community Service Society, *Housing Information*, Bul. 11, May, 1943.

<sup>7</sup> Public Housing Law, *Laws of New York*, ch. 808, art. 9:1939 (as amended).

<sup>8</sup> Report, State Superintendent of Housing to the Governor and the Legislature of the State of New York, Legislative Document 70, pp. 7, 12; 1940.

<sup>9</sup> *Matter of Murray et al v. La Guardia et al*, 291 N.Y. 320, December 2, 1943; also Redevelopment Companies Law, *Laws of New York*, ch. 845, 1942 (as amended).

<sup>10</sup> *Citizen's Housing Council News*, New York City, June-July, 1943.

Should post-war plans for East Yorkville include a limited dividend housing company, this will probably constitute only one of the less important solutions to the housing problem. The difficulty of getting the average investor to buy large blocks of limited dividend stock, or for that matter to include any of it in his portfolio, has proved to be a major factor in curtailing the effectiveness of this program.<sup>11</sup>

#### *What Does Yorkville Want?*

Housing redevelopment can be effected by annual governmental subsidies, by philanthropy, by the interest of large corporations who can benefit from governmental aid primarily in the form of tax exemption or by limited dividend capital. For example, a number of projects—among them East River Houses and Vladeck Houses in Manhattan—have come into existence through annual governmental grants. Lavanburg Homes—also in Manhattan—was made possible through philanthropy, and is for the low income groups.

In contrast, a project such as Stuyvesant Village which is to be constructed in Manhattan by the Metropolitan Life Insurance

Company under the Urban Redevelopment Companies Law, will benefit families in the middle-income group. Knickerbocker Village—located in the lower east side of Manhattan and built with limited dividend capital—at present houses the middle-income group. Tax exemption will be, or has already been, granted to both of these types of urban rehabilitation.

Each of the above procedures has been subject to criticism; nevertheless, each has made, or is likely to make a contribution to the housing program. To what extent one or more of them is used in Yorkville's post-war housing redevelopment depends upon whether or not the community wishes to ameliorate the exodus of families of low and medium incomes. The pertinent question is: what does Yorkville want?

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<sup>11</sup> From the organization in 1926 of the first limited dividend company to 1940, only 14 housing projects (accommodating 5,907 families) were built. *Ibid.*

(The authors wish to express their appreciation to Gertrude Goller and Roslyn Friedman, formerly on the social work staff of the Lenox Hill Neighborhood Association, for their cooperation in the field work done in connection with this study.)

## Public Utility Financing in the First Quarter of 1944

TOTAL public utility security offerings amounted to \$228 millions in the first quarter of 1944 as compared with \$29 millions in the first quarter of 1943. The volume for this quarter reflects the upward trend in public utility financing which began in the second quarter of 1943. The total for this quarter is only slightly below the average first-quarter total for the three years prior to the war. The public offerings of utility long-term bonds continue to exceed private offerings.

Public utility long-term debt issues sold publicly are shown in Table I. There are 7

issues listed and the weighted average offering yield is 3.20%. Underwriters' commissions averaged 1.32% and estimated incidental expenses .71%, while the net cost to the company amounted to 3.26%. The largest issue is the Florida Power & Light Company's first mortgage 3½'s of 1974 totaling \$45,000,000 and offered in January at 105.50 of par to yield 3.21%.

The privately offered long-term bond issues are listed in Table II. There were only two issues offered in this quarter. The \$63,000,000 issue of the Illinois Power Co., which sold at 101% of par to yield 3.94%,

TABLE I. SUMMARY AND ANALYSIS OF PUBLIC UTILITY LONG-TERM DEBT ISSUES OFFERED PUBLICLY, FIRST QUARTER, 1944

Company & Issue (A)	Coupon Rate (B)	Principal Amount (C)	Maturity Date (D)	Month of Offering (E)	Offering Price (F)	Offering Yield (G)	Underwriters' Commissions (H)	Proceeds to Company (I)	Estimated Incidental Expenses (J)	Net Proceeds (K)	Cost to Company (L)
Florida Power & Light Co. First Mortgage	3½%	\$ 45,000,000	1974	January	105.50	3.21	1.48	104.02	.54	103.48	3.32
Florida Power & Light Co. Sinking Fund Debentures	4½%	10,000,000	1979	January	100.46	4.10	1.44	99.02	.65	98.37	4.21
Central Ohio Light & Power Co. First Mortgage	3½%	4,300,000	1974	February	105.75	3.22	.59	105.16	1.05	104.11	3.29
Florida Power Corp. First Mortgage	3½%	16,500,000	1974	February	104.83	3.14	1.06	103.78	.87	102.91	3.22
Northern States Power Co. (Minn.) First Mortgage	2¾%	5,000,000	1974	February	101.00	2.71	.93	100.07	1.56	98.51	3.32
Michigan Consolidated Gas Co. First Mortgage	3½%	38,000,000	1969	March	106.25	3.17	1.47	104.78	*	104.78	3.26b
Oklahoma Natural Gas Co. First Mortgage	2¾%	18,000,000	1961	March	101.59	2.76	.50	101.09	*	101.09	2.80b
Total or Weighted Average	—	136,800,000	—	—	104.59	3.20	1.32	103.27	.71	102.19	3.29

<sup>a</sup> Information not available.<sup>b</sup> Net proceeds to company before incidental expenses.

accounts for practically all of the financing in this classification in the first quarter of 1944.

There were three preferred stock issues offered in this quarter, as shown in Table

III. All were sold in the last month of the quarter. This may be due to the fact that the recently enacted Federal Revenue Act, which was the subject of controversy between the President and Congress, repeals

TABLE II. SUMMARY AND ANALYSIS OF PUBLIC UTILITY LONG-TERM DEBT ISSUES OFFERED PRIVATELY, FIRST QUARTER, 1944

Company & Issue (A)	Coupon Rate (B)	Principal Amount (C)	Maturity Date (D)	Month of Offering (E)	Offering Price (F)	Offering Yield (G)
Public Service Co. of New Hampshire First Mortgage	3¼%	\$ 900,000	1973	January	*	*
Illinois Power Company First Mortgage	4	63,000,000	1973	February	101.00	3.94
Total or Weighted Average	—	63,900,000	—	—	—	—
Total or Weighted Average, excluding issues for which data are not available	—	63,000,000	—	—	101.00	3.94

<sup>a</sup> Information not available.

TABLE III. SUMMARY AND ANALYSIS OF PREFERRED STOCK ISSUES  
OFFERED, FIRST QUARTER, 1944

Company & Issue (A)	Dividend (B)	Principal Amount (C)	Month of Offering (D)	Offering Price (E)	Offering Yield (F)
Houston Lighting & Power Co. Pfd. No Par	\$4.00	\$ 6,120,000	March	102.00	3.92
Michigan Consolidated Gas Co. Cum. Pfd. \$100 Par	4 3/4%	4,000,000	March	105.50	4.50
Oklahoma Natural Gas Co. Pfd. Series A, \$50 Par	4 3/4%	9,000,000	March	52.00	4.54
Total or Weighted Average	—	19,120,000	—	—	4.33

the provision in the tax law prohibiting the use of preferred stock dividends of issues floated after October 1, 1942 as a credit against the corporation surtax. If this is true, it is reasonable to expect an increase in the number of preferred stock issues offered in subsequent quarters.

Two serial issues were offered in the first quarter of 1944:

\$4,000,000 Florida Power Corp. 3 1/4's, serial notes maturing 1944-1957 and sold privately.

\$4,000,000 Northern States Power Co. of Minn. 2 1/4's, serial notes maturing 1944-1949.

O. P. DEUEL

W. H. EVANS

*Assistant Rate Analysts  
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## Book Reviews



*Food as an Implement of War: The Responsibilities of Farmers.* By Joseph S. Davis. Stanford University: War-Peace Pamphlets, No. 3, Food Research Institute, November, 1943.

This is a rare pamphlet. When invited to speak at the recent annual meeting of the California Farm Bureau Federation, Mr. Davis forthrightly challenged the position of the Farm Bureau upon national food policies. He opened his remarks by saying that he craved "a heart-to-heart talk with you folks of the Farm Bureau," adding that he hoped they would hear him through. He pointed to the wartime increases in food prices and farm income. He reminded them that national programs for farmers have been based upon the belief that farmers have an underprivileged group. It is Mr. Davis' evident conviction that the leaders of the farm bloc have abandoned even a pretense of fairness in their drive for higher prices, shifting from a standard of parity prices to one of "get while the gitting is good." He wondered whether the rank and file of farmers knew of all this, and urged farmers at the "grass-roots" to call "halt" on their spokesmen. He concluded his address with a plea for a conversion to a more reasonable viewpoint, and specifically urged that farmers quit vying with labor in promoting their own short-sighted self-interests. Unless this is done, Mr. Davis warns, the public faith in the American farmer will be so shaken as to have a disastrous revulsion of public sentiment against farmers in the postwar era.

In this frank, electric and courageous talk, Mr. Davis aspired to "see things straight as history will." I have no doubt that he has essentially achieved this goal. He said many things that needed to be said. Yet historians will have to reckon with the

viewpoints of commentators also. Therefore, it may be in keeping with Mr. Davis' effort at true perspective to recognize that he too has a viewpoint. Essentially, it seems to me, Mr. Davis is true to a classical liberalism. He does argue for a limited subsidy program now—as a part of a flexible price scheme; but he definitely does not like "subsidies." Also, he urges farm and labor groups to get together on a program to subordinate their own immediate selfish interests to the broader public interest; yet he does not really acknowledge that corporations have taken care of themselves in the present war emergency. I mention this not to belittle in any way Mr. Davis' remarks but to point to the possibility that the deeper meaning of the current political fight over stabilization may not be evident until after the war is past. The prospects now are, in the reviewer's judgment, that the great conflicts after this war will come between economic power and political power. In such a contest the farmers and their spokesmen will do well to note that huge corporations and cartels are the greatest challenge to liberty and freedom.

KENNETH H. PARSONS

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*The Spending Power, A History of the Efforts of Congress to Control Expenditures.* By Lucius Wilmerding, Jr. New Haven: Yale University Press, 1943. pp. iii, 317. \$3.75.

This book presents an eminently readable and thoroughly documented inquiry into the efforts that Congress has made over the past one hundred and fifty years to control the use of moneys which it has appropriated to the executive establishments of the gov-

ernment. While the work is mainly confined to a critical analysis of the historical evidence and offers no program of reform, it does effectively explode a number of current myths about congressional power of the purse and challenges prevailing theories on fiscal organization and control. The study is quite original and rests upon several years of careful research into the records of Congress and of the treasury department, illuminated by the writings of leading statesmen.

In Part I of the book, Mr. Wilmerding discusses the efforts of Congress to control appropriations before their expenditure. He first takes up the important question of whether under any circumstances an executive officer may assume authority to override the express stipulations of appropriation laws. He shows by a number of well-chosen cases that such circumstances do occur and that, when they do, public safety and self-preservation are held to take precedence over these laws. In the eight chapters which follow the author traces the history of ordinary expenditure control from 1789 to 1941, pointing out the conventions which govern the appropriation of congressional grants. The most important of these conventions is described as the exclusive right of Congress to specify the several objects of appropriations and to limit the period of their application. The whole discussion leads to the conclusion that "the multiplication of appropriations, far from securing to Congress that completeness of financial control which is, so to speak, its constitutional birthright, has served only to make the law less certain and to satisfy Congress with the name, rather than the substance, of power." Other efforts of Congress to compel observance of appropriation restrictions before expenditure are also examined. These efforts, too, are shown to have been, in a large measure, self-defeating.

In Part II Mr. Wilmerding essays the whole problem of congressional control over appropriations after they have been expended. He analyzes what has been done in this direction through financial reports, through investigations by congressional expenditure committees and through the General Accounting Office. He comes to the

conclusion that such control as has been established for this purpose is ineffective—"that the attempts of Congress to arm itself with the machinery of retrospective control have altogether miscarried." Why? Because Congress failed to understand or to discriminate between the functions of audit and of control. It erroneously believed in 1921, when it created the office of Comptroller General, that it was establishing a congressional agent with powers like those of the British Comptroller and Auditor General. It overlooked the fact that the British officer exercises no powers of control, as manifested by the settlement of accounts, but only powers of audit. But the Comptroller General is expected to act simultaneously as an administrative controller and as a congressional auditor, thus making him, in a sense, his own auditor and so precluding the exercise of any degree of retrospective control over expenditures. Furthermore, while the British officer is held strictly to account by Parliament, the American officer is held to account by no one. This arrangement, authorized by the Budget and Accounting Act of 1921, the author calls a "pseudo-solution," perhaps less satisfactory than that which preceded it. Its shortcomings soon became so apparent that an effort was made in 1938 to establish an independent Auditor General and a Joint Committee on Public Accounts. The bill to create these agencies was passed by the Senate, but re-committed by the House; and in 1939 a modified reorganization bill was adopted which omitted the provisions relating to audit. No further attempts have been made to provide a congressional audit and the issue seems to be buried. The final result, according to the author, is "that Congress has not now, and has never had, any practical means of ascertaining after the event whether its financial authority has been respected or infringed."

Rarely has the reviewer seen so much historical material marshaled with such telling effect in so small a space. The smoothness of the composition keeps one from being overwhelmed by the prodigious amount of research involved. It is to be hoped that Mr. Wilmerding will have the opportunity, after his present military assignment is fin-

ished, to present his views on the solution of the problem so clearly demonstrated in this volume.

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*Food.* By Frank A. Pearson and Don Paarlberg. New York: Alfred A. Knopf, 1943. pp. xi, 239. \$2.75.

This book deals with numerous aspects of food management during wartime. It does not, however, purport to give a calm, objective analysis and appraisal. The authors tell us frankly in the preface that they propose to be the "devil's advocates" in favor of free-market prices and against government control. As advocates they quite naturally emphasize both the good points of the measures they approve and the bad points of those they oppose.

The book contains a major and a minor thesis. The major thesis is two-fold: first, that in attempting to manage food, government has bungled the job; and second, that the simple solution of the "food muddle" is to let the price system function. Free-market prices, they claim, would not only do away with the necessity of rationing, eliminate the cost of price ceilings and subsidies, and wipe out the black markets but they would have the positive virtues of guiding production, distribution, and consumption wisely and well, and of lapping up excess purchasing power.

The minor thesis is that as the food shortage grows worse, which the authors contend it will do, civilian consumption will have to be shifted from livestock products to cereals. Just how this shift can be accomplished under free-market prices the authors do not explain.

In attacking government regulation of food in wartime as well as in peacetime and in periods of depression as well as in periods of prosperity the authors "throw rights and lefts" in all directions and manage to land some solid blows. But at the end

of the twelfth and final round the foe, although somewhat groggy, is still on his feet and appears to be in fair condition—or so it seems to this reviewer.

H. R. WELLMAN

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*Wartime Problems of State and Local Finance.*

The Tax Institute, in publishing *Wartime Problems of State and Local Finance*, provides a collection of extremely well developed articles presented at a symposium conducted by the Institute in New York City on November 27 and 28, 1942. They deal with the effects of the war on the fiscal problems of states and their political subdivisions. This publication contains an accumulation of facts and figures that will be of extreme interest to the student and also prove of historical value. Such portions of the publication as relate to the ultimate effect of the present war upon local finances are in part only conjectural although in part foreshadowings emanating from definite experiences which have been relied on as illustrative material by the contributors. An examination of some of these articles in the light of what has transpired since November, 1942 emphasizes the advantage of basing forecasts on the very latest information available and reveals that the course that the war effect is taking is somewhat contrary to the prophecies.

The foreword well points out what is to be found in the volume itself. Each of the seventeen chapters has something of definite merit and one not interested in all of the subject matter may read one or more chapters as his desire dictates. The arrangement of the book and its division into five parts with an appendix recording brief resumés of regional round tables preliminary to the symposium is evidence of the intelligence with which the material was compiled. An extensive bibliography and an index add to the practical value of the volume.

The Buck article with which the book opens depicts conditions relating to costs over which the states have no control as analyzed by one well-qualified by experience to evaluate happenings and to analyze established facts. Similar comment may be made in respect to the Dayton article dealing with local costs and more particularly those of New York City. More general in character, the Patterson chapter concludes in an able manner the subject matter of Part I, all of which is captioned "What the War Is Doing to State and Local Costs."

Part Two relating to "What the War Is Doing to State and Local Revenues" begins with the Sims article which should be of real value to those who are concerned with state revenues purely for state purposes, as the Spengler article which follows it is helpful to those interested in property taxes. The Smith article relates to miscellaneous local revenues indicating where declines are taking place and the possibilities of new charges to offset declines.

Part Three treats of "Intergovernmental Fiscal Problems as Accentuated by War." The Ford article, which opens this series presents a concise and unbiased survey of the chief problems of intergovernmental tax exemptions. This is followed by the Studenski article relating specifically to bond exemptions and the Rhyne article dealing with the growth of federally-owned property and the possibilities of service payments in lieu of taxes. Although these articles disclose divergence of thought, particularly in respect to bond exemptions, they may be read with great benefit.

Part Four moves into the field of post-war adjustments and fiscal planning which is handled most intelligently in respect to capital improvements by the Black article and in respect to public works by the Perloff article.

Part Five comprises a series of helpful contributions by La Guardia, Burger, Pond, Ford, Frye and Bird relating to state and local fiscal responsibilities in winning the war.

The book deserves a place on the desk of everyone concerned with state and local government, the impact of the war, and the problems—now becoming apparent—which

must be solved through intelligent understanding and planning.

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*Come Over Into Macedonia.* By Harold B. Allen. New Brunswick, New Jersey: Rutgers University Press, 1943. pp. 308. \$3.00.

This is an absorbing story of the ten years' progress of a successful pioneering educational and rehabilitation undertaking in Macedonia. In 1928 when the project was undertaken by the Near East Relief (later transformed into the Near East Foundation) Macedonia was predominantly peopled by refugee settlers from Asia Minor who had fled to Greece six years earlier. The total influx of refugees was around one million three hundred thousand, swelling the Greek population by almost one-third. Macedonia, one of the three northern provinces of New Greece and comprising slightly more than one quarter of the total area of Greece, absorbed approximately three-fourths of these refugees under government land division, relief and rehabilitation programs.

Harold Allen, apparently trained for the teaching of vocational education in the United States, hit upon a combination of adult education phases of this work and the agricultural extension approach as the method of improving the primitive agricultural practices of these Macedonian farmers. His story follows the establishment of this program on a demonstration basis with eight agriculturists working in forty-eight villages. Soon a recreation program including community reading rooms, donkey traveling libraries and music groups was a part of his work. A home welfare department (model homes on a scale attainable by the village farmers) soon became an integral part of the program. Supervised by American girls

the department established day nurseries for children, baby well-clinics, classes of instruction in cooking, sewing and home sanitation and demonstration homes which were the center of these activities in the villages.

Early in the work a department of sanitation was established which by educational methods including demonstrations made the local village people aware of the possibility of improving their water supply and adopting other sanitary practices. Then by furnishing expert guidance and a small part of the cash costs, villages were helped to improve their water supplies, provide latrines for schools and homes, drain swamp holes and clean up manure and rubbish piles.

All of these departments were conducted on a demonstration basis in close cooperation with government officials. It was hoped that, as the methods employed proved their worth, they would be taken over by the government. The methods of the sanitation department were so outstanding that they were the first to be incorporated into government policies.

Allen's staff of field workers, native Greeks trained in the secondary schools and then given special training as the project developed, started with the simplest of improved practices.

In their first year the list of improved home hygiene practices included "farm animals not in bedrooms," "outer clothing removed at night," "house properly cleaned." One of the improvements listed was the co-operative purchase of purebred bulls by the farmers in three villages where, although there were one hundred eighty cows, the absence of bulls for a period of six years had almost dried up the milk supply. Through the use of surveys and follow-up records they kept their program adapted to village needs and were able to show substantial progress. This resulted in the government's taking over most of the program as the basic project for all of rural Greece toward the end of the ten-year period.

It is indeed a stimulating account of a successful endeavor—a story of a successful approach toward the solution of human poverty wherein the rural people were given guidance and stimulation in helping themselves improve their living conditions. It re-emphasizes the necessity of looking and

planning beyond the period of postwar relief to a longer period of rehabilitation and reconstruction. At the same time it suggests a plan for undertaking the work of this later period in a way which will minimize the danger of this country's antagonizing the people it is trying to help. We might well review this story in relation to our Latin American activities.

WALTER W. WILCOX

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"The California State Land Settlements at Durham and Delhi." By Roy J. Smith. Berkeley: California Agricultural Experiment Station. *Hilgardia*, October, 1943. pp. 399-492.

The entire October, 1943 issue of *Hilgardia*, a publication of the California Agricultural Experiment Station, is devoted to Professor Smith's study of the famous Durham and Delhi land settlement projects in California. Since land settlement projects will certainly be advocated and pushed as postwar vehicles for veteran readjustment, this report can serve a highly important social function.

When the Durham and Delhi projects were undertaken they were not regarded as wild ventures. On the contrary, the leader was "the outstanding authority in the field. The plans involved were of a fundamental and important character." As a matter of fact, "the immediate purpose of the initial act was to demonstrate desirable land-settlement methods." The projects did not lack the advice of expert technicians. In view of the respectable background of the projects, a careful study of their colossal failure, such as Professor Smith presents, is indeed a real contribution.

A most important point is that the detailed analyses and plans were made after the purchase of the land. If these studies had been made first, the sites might not have been bought. However, Professor Smith significantly points out that, assuming that

tracts had to be purchased, the choice of Durham and Delhi appears reasonable. The clear implication is that if careful feasibility studies had been conducted, the State Land Settlement Board would never have started any projects.

Professor Smith concludes that the failures cannot be blamed on price declines, credit terms, poor administration, incompetence of settlers, or on state management.

Finally, and very important to all governmentally-sponsored settlement programs is this concluding observation: "Settlers, juries, public, and administration alike did not accept as final the contractual relations that existed between the state as creditor and the settlers as debtors."

On those who advocate programs of public settlement in the future must rest the burden of proof for the social desirability of their pet schemes. No land economist can afford not to have studied the especially important lessons to be learned from the California State Land Settlement Board's experience.

LEONARD A. SALTER, JR.

*University of Wisconsin*



*The Wisconsin Pine Lands of Cornell University.* By Paul Wallace Gates. Ithaca, New York: Cornell University Press, 1943. pp. xi, 265. \$3.50.

Doctor Gates' monograph on the location by Ezra Cornell of 500,000 acres of Land Grant College scrip on the pine lands of northern Wisconsin deals with a period when the nation's policy toward its lands was consistent only in its determination to develop and exploit them. In all other respects the land policy was not to let the right hand know what the left hand was doing. For 70 years the Congress with its right hand had been making it progressively easier for actual settlers to acquire family-size holdings for homes and farms. To that end it had reduced the price of public land and the minimum size of holding that could

be purchased, enacted pre-emption laws which protected settlers from speculative buyers who might outbid them, and finally enacted the Homestead Act which permitted a settler to acquire 160 acres of public land simply by improving and living on it, and paying some nominal filing fees. But throughout the same period Congress with its left hand was facilitating the engrossment of tremendous acreages of public land by speculators. It never had placed any upper limit on the acreage that one person could purchase, and it had continued to encourage speculative acquisition through extensive grants of public lands to states and corporations in aid of education and public improvements.

This confusion of purposes in the nation's land policies reached a climax in 1862, Dr. Gates points out, when within thirteen days the Congress enacted the Homestead Act, whose purpose was to grant lands to actual settlers, and also the Land Grant College Act which eventually led to the entry of almost 8,000,000 acres of public land by large speculators. At the same time Congress was formulating legislation to make grants of land to western railroads which were to take more than 100,000,000 acres out of the public domain.

The Morrill Act, or Land Grant College Act of 1862, granted to each state 30,000 acres of public land for each senator and representative it had in Congress to aid in the establishment of a college of agriculture and the mechanic arts. No land could be entered by the state governments themselves; it was the intention that the land scrip issued to states should be sold to individuals who would enter the land. The measure had been hotly debated prior to its passage. It had been favored by the eastern states which had no public lands but, in spite of its laudable purpose, was generally opposed by the western senators and representatives who saw in it only another means of encouraging speculative monopolization of public lands in their states.

Most of the states, including Wisconsin, disposed of their scrip through sale in large blocks to scrip dealers, receiving low prices for it. Brown University, to which Rhode Island's interest in its scrip was assigned, realized only 42½ cents an acre from it. Most of the other states realized less than

a dollar an acre. The University of Illinois located 25,000 of the 480,000 acres of land scrip it received on the public lands in Nebraska and Minnesota and realized more from the sale of these lands than from the direct sale of all its remaining 455,000 acres of scrip.

New York followed a different procedure. It sold all except 76,000 of its 990,000 acres of land scrip to Ezra Cornell, an up-state business man, and assigned the proceeds to the university which Cornell had founded on the heights above Cayuga Lake at Ithaca. Cornell agreed to enter the scrip, manage the lands until they could be sold profitably, and return all the proceeds above costs and 7 per cent interest for the use of his capital to Cornell University. All but the first two chapters of Doctor Gates' book are devoted to the enterprise of entering, managing and disposing of the Cornell scrip on the pine lands in northern Wisconsin, and to the relationship of the enterprise to monopolization and exploitation of the timber lands of that area.

In entering the pine lands Cornell worked through an agent in Wisconsin, an old friend and former resident of Ithaca, who in turn employed a clerk in the district land office at Eau Claire. The land office clerk was at the same time a private land agent, a prominent local politician, a promoter, and a timber speculator on his own. By simultaneously representing the United States Government, his private clients and himself in the land office, he displayed a nimbleness of conscience that would amaze most present-day civil servants. Largely through this man's services, some of which were of highly questionable legality, Cornell was able to enter 499,126 acres, including some of the best white pine lands in the state.

By 1868 the university trustees were in dire need of immediate funds and Cornell was prevailed upon to sell all of the remaining scrip with the exception of a few thousand acres which he had entered in states other than Wisconsin.

Management and sale of the Cornell lands in Wisconsin turned out to be a difficult and sometimes discouraging, but eventually successful, project. In spite of the fact that the lands were entered for the benefit of an

educational institution, Wisconsin residents placed them in the same ill-favored category as the lands of other absentee speculators. From the first it was an unremitting struggle between the Cornell trustees on the one hand, and the elements, the timber thieves and the tax gatherers on the other. Fires and windstorms destroyed a considerable amount of the timber and the local agent for the land was continually engaged in ousting squatters or attempting to recover damages for stolen timber. The pioneer settlers, while they probably never had heard of Henry George and his doctrine that the state should appropriate the economic rent of land through taxation, nevertheless set about in rough and ready fashion to apply such a doctrine to the absentee-owned pine lands, including those of Cornell University. Their purpose was not altogether the altruistic one of providing adequate public facilities and efficient public services for all the local citizens, according to Dr. Gates, but partly to enable a few insiders to secure unjustified profits from the construction of unneeded roads and fancy court houses and from lucrative public offices. But Henry W. Sage, John McGraw and the other shrewd business men who were Cornell University's trustees fought constantly to protect its rights. While unsuccessful in their efforts to secure tax exemption for the Cornell lands, they were able through their local agents to sue, enjoin, protest against, and otherwise restrain the local tax gatherers sufficiently to hold the total tax payments on the land down to about 10 per cent of its gross sales value.

Sales of Cornell University lands began shortly after the first lands were entered, reaching a large volume in the seventies and eighties. By 1906 practically all of the lands were sold and the last title was transferred in 1925. Prices were low at first but mounted rapidly as the pine stumpage in the Lake States was depleted. Gross income from sales of land and stumpage, rents, and miscellaneous sources was \$6,780,000. Total expenses were \$1,729,000, leaving a net profit of \$5,051,000 to be paid into the Cornell endowment fund, in addition to the \$603,000 for which the land scrip originally was sold.

The Cornell land business, the book

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states, was one of the outstandingly successful land speculations in the American history but, like other timber land speculations, left the pinery counties nothing to compensate them for the wealth that had been taken away.

This book is a welcome addition to the series of special and regional studies of public land disposal which Dr. Gates has been making in preparation for writing a general history of the disposal of the public domain. It is the product of painstaking research of public land records and of private collections of correspondence and is heavily documented and well-indexed. While perhaps suffering in spots from too much detail, on the whole it is highly readable.

JOHN B. BENNETT

*Director of Land Classification,  
Office of Land Utilization  
Department of the Interior*



*Municipalities and the Law in Action*. Yearbook, National Institute of Municipal Law Officers. Edited by Charles S. Rhyne. Washington, D. C.: 1943 edition. pp. 611. \$7.50.

The repercussions of the war upon the city governments of the United States are strikingly illustrated in this new edition of the yearbook issued by the official organization of the city attorneys of the country. Newspaper publicity has dealt largely with the war problems and activities of federal departments and, to a lesser extent, with those of state and civilian defense agencies. Hence there has been a tendency to overlook the fact that local governments also have encountered many problems and have had to be prepared to deal with war emergencies so that if called upon they could function as effectively as English city governments have done in discharging definite assignments in the "Battle of Britain."

To a considerable extent this has involved readying regular city departments to cope with defense activities closely related to their normal activities. In many fields the

municipal department was the logical agency to assume this responsibility. In other words, good municipal government proved to be the best defense.

As its legal advisor the city attorney finds that inevitably he is participating extensively in determining the policies of his municipal government. The extent to which (since Pearl Harbor) such policies deal with the war is clearly revealed by the wide range of topics considered at this annual conference of the leading municipal attorneys of the nation.

This meeting has developed into a forum for the consideration of the current phases of municipal law which are of most immediate importance. The resulting volume is increasingly regarded as an invaluable reference tool by city attorneys and by others who deal with the law of municipal corporations. It includes not only the papers delivered at the meeting but also the general discussion of such subjects, the surveys and research presented in the reports of special committees, the model ordinances, and the like. The material is pre-eminently practical in character because it is the product of those who actually have to wrestle with these problems as they arise.

One point becomes quite clear as the contents of this volume are read, and that is the increasing number of direct contacts between the federal government and the cities. Although in theory cities may be creatures of their state governments, except insofar as the people of a state may have written direct home rule power into the state constitution, nevertheless in practice the federal government is more and more by-passing the state governments and is dealing directly with city governments. The practical realities have demanded such a procedure.

There is included a general survey of the war-time legal problems of cities and also of federal legislation and federal departmental regulations affecting cities. Many of these topics are subsequently treated in greater detail, largely as committee reports. These subjects can be roughly classified under four categories: (1) Emergency responsibilities such as blackouts, air raid precautions, anti-sabotage. (2) Cooperation with federal agencies such as federal taking of municipal airports, suspension of local building codes to permit war housing, the

problem of enforcing general municipal ordinances against army and navy personnel. (3) Municipal regulations required by the defense emergency, including curfew, trailer regulation in defense areas, auto theft ordinances, control of solicitation for war causes. (4) Indirect effects upon city government such as the restriction of municipal operations because of priorities, etc., adjustments of municipal wages to conform to prevailing scales, leaves of absence for municipal employees entering the armed forces, and the like.

The war and public utilities from the city standpoint is considered in one committee report which deals with mass transportation problems and transportation control, ODT orders, federal power commission activities including certificates of public convenience and necessity under the natural gas act, the prospects for municipal ownership as a result of the holding company act, and related matters. There is a special report questioning the power of public utilities to pass on emergency taxes to customers.

The numerous ways in which municipal airports are affected by the war, such as emergency regulations, army and navy use, the CAA program, etc., are surveyed in another committee report, as well as recent state legislation and court decisions.

The shift in emphasis in public housing from low rent and slum clearance to war housing and various federal programs are discussed in still another committee report. New state laws and court decisions are also listed.

Many other topics are dealt with in special committee reports. Altogether a wealth of valuable material is assembled into this volume.

FREDERICK N. MACMILLAN

*League of Wisconsin Municipalities*  
Madison, Wisconsin



*Years of This Land.* By H. R. Muelder and D. M. Delo. New York: D. Appleton-Century Co., 1943. pp. 243. 11 maps and 11 photographs. \$2.50.

The scientist who looks for a contribution only at the technical level and for citations

that would guide him into the deeps would better not trouble to read this book. It is not meant for him. There are many others who can be glad for what this book conveys in the way of viewpoint and interpretation. One might wonder whether motion picture rights may not be sought.

That the authors reached out for a popular note is more than hinted by the headings of the nine chapters, of which the first is "Thy Rocks and Rills," and the last "Unmanifest Destiny." The maps are designed to convey elementary facts of geology and history, and are exceeded in dignity by the photographs.

Desire for dramatic effect sometimes tempts the authors into use of adjectives and figures of speech which may be indispensable for immature readers. "The American republic stumbles through like a blind giant guided by the imps on his shoulders," says the authors. This estimate as to foreign policy comes in a late chapter in which the authors develop the thesis that geography is not static. These geologists draw the long bow in international jurisprudence. Specialists can sometimes write like some evangelists have talked and some readers can still benefit from the reading. Specialists may choose to roam afield of their specialties and still serve useful ends. These geologists resort to an interesting bundle of tricks. School libraries may find that this book fills a need.

CHARLES L. STEWART

*University of Illinois*



*Unused Resources and Economic Waste.*  
By David Rockefeller. University of Chicago Press, 1941. pp. ix, 260. \$2.00.

If economics is defined as what economists talk about, the scope of the field has broadened in recent years. Unused resources, even unemployed labor, were assumed to be unimportant until economic crises focused attention upon them. Mr. Rockefeller has provided us with an able analysis of the meaning of economic waste and with an appraisal of empirical attempts

to measure the extent of waste due to unused resources.

In order to attack the problem of waste, the theory of resource use is developed under static conditions and some essential changes for non-static conditions are indicated. Then, after treating the influence of economic and political institutions, monopoly adjustments are shown. A critique of three empirical studies of unused resources shows the National Resources Committee's *Pattern of Resource Use*, by Gardiner Means and associates, to be the least unsatisfactory and the New York Housing Authority's *Report of the National Survey of Potential Product Capacity* to be the most inadequate. The several volume studies of Brookings, which include *America's Capacity to Produce*, are regarded as seriously deficient in many respects.

The definition and the meaning of waste has a central place in the essay and is best approached negatively by explaining what is not waste. Monetary and financial institutions, even though they contribute to credit instability which leads to unemployment, should not be called wasteful unless an alternative system can be demonstrated to be superior and unless the costs of changing are less than the benefits which would be derived. (p. 102) Monopolistic competition reduces output and prevents least cost operation, but whether this is waste or not is in some doubt. Cartel organization limiting output is a "clear cut case of social waste," but the percentage of "capacity" that is unused does not represent waste either from the individual or the social viewpoint, since capacity as ordinarily used does not represent either maximum or ideal output.

This is a critical point, for if a benchmark representing "possible" cannot be established as *capacity*, how can unused capacity be measured? This problem must be solved if waste is to be measured, for waste is a comparison of the actual with the ideal or possible output including costs of shifting. While the search for a measure of "excess capacity" in the empirical studies was marred by numerous errors, Rockefeller feels that the search was basically fruitless—that such a measure of waste is not "statistically determinant."

"Examination of empirical efforts in that direction serves only to strengthen our con-

tention that the "best" use of resources is not to be confused with 'full' use and that the 'optimum' output of a product is not necessarily the same as 'maximum' output." (p. 200)

In the preface the author explains that two considerations are of paramount importance: First, to discover why fixed resources are sometimes used in production and at other times left idle, and second, to understand the meaning and cause of economic waste. These considerations are convenient to use in appraising the degree of success achieved. In the first, he is very successful. The use of resources is detailed in an able fashion that reflects both good theory and sound judgment. In the second, success is not so unqualified; this is in part inevitable, for the measurement of waste is deemed insoluble. In seeing the limitations of the "capacity" concept and the difficulties in measuring the unused portion, the author corrects many errors in popular thinking, and the catalogue of mistakes is a welcome contribution. This reviewer feels that he was a little overawed by difficulties of measuring waste; similar difficulties occur in attempts to measure unemployment, yet figures on it are not meaningless, even though inaccurate.

This well-written book is a significant contribution to an important field in which semi-technical books have had a wide and sometimes misleading influence.

L. JAY ATKINSON

*Bureau of Agricultural Economics,  
U.S. Department of Agriculture*



*British Finance, 1930-1940.* By Walter A. Morton. Madison: University of Wisconsin Press, 1943. pp. xii, 356. \$4.00.

Great Britain's economic development during the inter-war period is one of the most fascinating chapters of modern economic history. At no time during this whole period could one describe British conditions as having achieved a condition of "long-

term equilibrium." During most of that time Britain suffered from a moderate stagnation and fairly acute depression or lived through a period of uncertain recovery. Dr. Morton has chosen the second inter-war decade as the topic for his study. In order to explain the break-down of the gold standard in 1931, he had to go back to the stabilization of 1935 and its aftermath. (He considers, incidentally, that the "over-valuation" of the pound was not among the important causes of the crisis in 1931.) Even though limited, his study covers a great many interesting and important events and problems.

Dr. Morton divides his book into three parts, the first of which is devoted to the financial crisis of 1931, its antecedents, and its aftermath; the second, to international finance; the third, to domestic financial issues and developments of Great Britain. The second part is divided into five chapters, of which three deal with the world scene and two with various items of the British balance of payments. The transition from the first group of chapters to the second is not clear. Neither is the connection between the second and third part of the book made sufficiently clear.

While Dr. Morton's book would gain considerably in clarity and forcefulness if the materials in it were better organized, in its present form it is nevertheless intensely interesting. Dr. Morton is essentially internationally-minded. He blames monetary nationalism and the failure to coordinate the economic policies of the major economic powers for much of the trouble in the second post-war decade. Specifically, he blames on monetary nationalism the break-down of the London Economic Conference in 1933. He does not explain where the roots of monetary nationalism are to be found. If he attempted to do so he probably would find them in the failure of the major economic powers to build an integrated world economy and world society after 1919; at the same time he would find the basic cause of the economic, financial and monetary crises of 1929 and the following years.

The recovery of Britain after 1931 is attributed neither to the tariff nor to the depreciation of the pound, nor yet to the "cheap-money policy," but rather to structural changes in the British industry and to the stimulating effects of the housing program.

The descriptive parts of the book are, on the whole, better than the analytical ones. The scope of this review doesn't allow it, however, to go into the details of Dr. Morton's arguments. His book is extremely interesting, even though it doesn't offer as much challenge as it would were its conclusions more definite. It is not a definitive treatment of that exciting period of Britain's economic life but it can be considered a very workmanlike "Interim Report."

MICHAEL A. HEILPERIN

*Hamilton College, Clinton, New York  
and The National Bureau  
of Economic Research.*



*Agricultural Production in Continental Europe during the 1914-18 War and the Reconstruction Period.* Economic, Financial and Transit Department, League of Nations. New York: Columbia University Press International Documents Service, 1943. pp. 122. \$1.75.

This brief report should prove useful to all who are interested in the question of post-war agricultural recovery in Europe. In Part One, a statistical picture of agricultural production in Europe from 1913 to 1938 shows that output declined sharply in the war years and, in general, did not regain its pre-war level until 1925. In the second part, there are short analyses of the various factors which affected the decline and recovery: land area and yields, labor, livestock, equipment, fertilizer, transportation, land reforms, and farming profits.

Over half of the space in the report is devoted to the appendices and the bulk of these comprise an excellent series of maps showing changes in agricultural production in continental Europe by districts.

While the study is by no means exhaustive, it represents a considerable achievement in constructing indexes from difficult source materials. The resulting information should find many uses because it is timely.

LEONARD A. SALTER JR.

*University of Wisconsin*



*This Fascinating Lumber Business.* By Stanley F. Horn. New York: Bobbs-Merrill, 1943. pp. 328. \$3.75.

Forest land and the industries it supports make up an elephant whose anatomy has been described in bits and parts by many observers. No one, in the reviewer's judgment, has given us a well-rounded picture of the whole. This work, by the editor of the *Southern Lumberman*, also gives only a part of the picture and that is blurred in spots.

Jacket blurbs indicate this to be a companion to other Bobbs-Merrill books on the "fascinating" railroad and oil industries. Apparent purpose is to build good will for the lumber industry, to assure us that forest resources are in competent hands with no cause for public concern except that the government should be more generous in providing money for control of forest fires, insects, and tree diseases.

Dedicated to the United States lumberman "whose great service to the country has never been properly recognized or appreciated," a large part of the book is devoted to the history of lumbering and to descriptions of its technology.

The historical material relates that the industry started and grew thus and so, and discusses its dominant personalities. How the land was acquired, how legislatures were manipulated, the stormy history of labor relations—the more fascinating parts of the story—are left out. The descriptions of technology, on the other hand, are more exciting, especially the factual descriptions of recent advances in timber engineering, plywood, wood preservation, seasoning, and wood chemistry.

In a chapter on "Lumber in Warfare" Mr. Horn says, "So far the industry has been able to hold its record of meeting all demands." No account is taken of the government restrictions placed on lumber use beginning in 1942, such as the prohibitions on use of lumber in housing (even temporary war housing), and requiring the use of

masonry instead. These restrictions came precisely because of inability to meet the demand. This chapter is already out-dated. Evidently written at the time when wood was being substituted for "scarce" materials, the book reaches the public after forest products have become the number one critical raw material with substitution moving in the other direction.

A chapter on the "Economics of the Lumber Industry" deals briefly with transportation, labor, taxation and trade promotion, and more extensively with exports and imports, and lumber grading and inspection. Both local and federal taxes are treated as major deterrents to the practice of forestry. A decline in per capita lumber consumption since 1904 is attributed to the inroads of substitutes. No consideration is given to other, perhaps more significant factors, such as the mounting prices of high-quality lumber; the inferior quality of lumber produced by premature harvest of second-growth timber; and the lag in construction which prevailed in rural areas through most of the twenties and thirties, and in urban areas during the thirties.

An optimistic picture of timber supply is achieved by relating the volumes of standing timber and of forest growth to the rate of forest drain which existed in the thirties, a period when lumber consumption lagged. Even these comparisons are made in a manner which leads to much more optimistic inferences than those of the U.S. Forest Service reports for the same period, which show a marked deficiency of saw timber replacement.

While the book is strong on the technology of lumber manufacture, it is weak in treating the technology of the forest itself, i.e., silviculture and forest management. The latter are treated optimistically, with the industry learning to practice selective logging because it has found that "below a certain diameter limit the small tree does not pay its way through the sawmill" (p. 265). If the whole forest industries picture were viewed, rather than lumber alone, the error of the author's big-tree, small-tree selective logging concept would be apparent immediately. While small trees may be unprofitable for lumber, they are a major source of raw material for pulpwood, railway ties, mine timbers, charcoal, poles, posts and fuel

wood. This fact is ignored. Yet, all these uses are making uncoordinated raids on the forest—with fuel alone taking a greater wood volume than lumber. This reviewer, therefore, must insist that sound forest management is not achieved merely by taking the big trees for saw logs and leaving the small ones. Rather, selective logging must consist of taking the mature, overcrowded and defective trees and leaving the vigorous trees to grow. This means that overcrowded and defective small trees should be harvested for the uses to which they are suited while many larger trees which are still growing at a good rate should be left to grow. By dealing with lumber alone, Mr. Horn grossly over-simplifies the problem of forest management.

The uninformed will be misled, the informed will be amused, by statements such as, "The modern logging camp *usually* [italics added] consists of individual bunk houses with only two beds in each house . . . But for . . . calk marks on the wooden floors, you might think you were in a room in a college dormitory" (p. 74). Having come only very recently from visiting logging camps in the Northwest, your reviewer must testify that such idyllic arrangements are distinctly the exception, not the "usual." Nor, of course, does Mr. Horn relate the long struggle of the woods workers to transform the logging camp slums into decent living quarters for a working man.

To one familiar with the advances made in labor relations and in labor-management cooperation in most of our major industries, the absence of references to such progress in the lumber industry is puzzling. The story of Willie the crapshooter, whose deferment was sought because of his services in keeping sawmill workers broke, speaks for itself on the status of personnel relations in lumber (p. 237).

An appendix includes a brief write-up on each of 18 lumber trade associations and the Forest Conservation Policy of the National Lumber Manufacturer's Association.

Even as goodwill publicity for the lumber industry, the book would be more effective if it were more objective and more complete. The optimism about forest growth versus drain and the glorification of the industry are laid on too thickly to be believed

by many who may read the book. And the significant omissions are too apparent to be overlooked by the intelligent reader.

ELLERY FOSTER

*Washington, D.C.*



**Roots in the Earth.** By P. Alston Waring and Walter Magness Teller. New York: Harper & Brothers, 1943. pp. 198. \$2.50.

The authors of the book, two farmers from southeastern Pennsylvania, set out to discuss "why the family-size farm should survive and the way by which it can be accomplished." The family-size farm is broadly defined as a commercial unit depending largely on family labor for its operation. In American tradition and agricultural thinking this type of farming, based on operational ownership, has always been recognized as the most desirable and fundamental for our social system and democratic institutions. Those in disagreement with this point of view have placed the efficiency of large-scale farming as the main factor in argument. The authors of the book defend the family-size farm not only from the standpoint of social desirability but also on the basis of efficiency which now can be achieved if certain procedures are followed. In the first place, most modern machinery is well adapted to a small farm and should be used to the same extent as in large-scale farming. Full advantage should be taken also of all the modern improvements in livestock breeding and land cultivation, and of the most efficient methods in the production and marketing of agricultural products. All these things can be made accessible to small farmers on favorable terms by means of co-operative action which should be organized and supported by the farmers on the most democratic basis.

The owner-operated family-size farm is viewed as not only providing employment and a desirable way of life for a large section of our population but also as the best means of achieving the permanent or conservation agriculture. However, this and

other objectives in small-scale farming can be achieved only—and this is the fundamental thought of the authors—through the active intervention and assistance of the government. They contend that a small farmer, "if he clings to his rugged individualism and rugged isolation cannot survive." To begin with, it is difficult now for the average individual to attain ownership of an adequate farm unit and therefore the government should breach this first handicap by supplying cheap and liberal credit, something along the lines provided by the Farm Security Administration under the tenant-purchase program. Furthermore, the USDA through its constituted agencies, especially SCS, AAA, and FSA, should use its facilities to the fullest extent to aid the small farmer. With these extensive activities of governmental agencies it is important, however, that the process of decentralization should be broadened and that the farmers should participate in matters affecting agriculture, especially through local land use planning committees, soil conservation districts and AAA committees.

The main reason for more active governmental participation in the field of agriculture is based on the authors' contention that "today in America there is a gigantic struggle between two opposing forces in agriculture, between the large farmers and the small farmers, and the latter are badly prepared and poorly organized to defend themselves."

This fundamental idea of antagonism existing between large and small farmers is constantly emphasized by the writers. Outside of a few special areas and types of farming, it is rather difficult to accept this assertion in such unqualified terms as characteristic of American agriculture. Another question might be raised in regard to the unlimited faith in what government assistance and intervention can do for the small farmer. It is very doubtful whether every individual engaged in farming, even with the benefit of government assistance and an improved system of rural education, could measure up to all the business and social responsibilities which the authors set up as necessary qualifications for the survival of small-farm ownership and operation. Greater recognition should be given to the im-

proved tenancy system, both as a means of providing a stepping stone to full ownership and for the accommodation of those large groups among small operators who, temperamentally and intellectually are not adjusted for assuming the responsibilities of owner operation.

The book itself presents very stimulating and interesting reading. It touches on many social problems related to our rural life and develops a philosophy of social responsibility for men working on the land and for all those who are concerned with the preservation of our human and natural resources.

DAVID ROZMAN

*Research Professor of Economics,  
Massachusetts State College*



*The American Land: Its History and Its Uses.* By William R. Van Dersal. New York: Oxford University Press, 1943. pp. xvi, 215. \$3.75.

The title of this attractive and interesting book must be read with the understanding that the author is a botanist-biologist, not a land economist. The economist reader may for a moment be disappointed that here is not another Van Hise or Hibbard; but he will soon be fascinated by the fresh view he will gain by looking at land use through Mr. Van Dersal's biologist's glasses.

The book is a layman's book, "a simple story about American land and how it is used," distilling and vivifying much technical material. "The Land in the Beginning" is first sketched to show the original cover of the land and the life it supported. There follows a series of chapters, the bulk of the book, each devoted to one kind of product of the land—grain, corn, cotton, sugar, tobacco—not overlooking "Berry Patch and Vineyard" and "Vegetable Gardens on a Grand Scale." In each of these chapters the author blends biology, ecology, economics, and history. The story of "The Origin of Indian Corn" is no doubt fully elaborated in the Texas Agricultural Experiment Station

bulletin to which Van Dersal refers: the deliberate breeding back to a protocorn and the search for its natural counterpart in the upper Amazon is as fascinating as a detective story in Van Dersal's succinct telling. He has succeeded in communicating well his own passion for everything that grows, its why and where.

Rounding out his picture of land use, Van Dersal has brief, vivid chapters on grazing, forestry, wild life and recreation, erosion, and "The New Land Pattern" of contour plowing, strip cropping, terracing that is truly changing the face of the land. The volume is copiously illustrated with dramatic pictures; the text is pithy and colorful. It is a refreshing book.

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*Montana—High, Wide and Handsome.* By Joseph Kinsey Howard. New Haven: Yale University Press, 1944. pp. 347. \$3.00.

This story is much more than a well-told account of the dramatic events of the Great Plains country—it is a series of carefully chosen economic and social landmarks which illustrate the manner in which each rapidly passing era was ushered in and pushed out. It is difficult to sift events of the past and to pick those which were important, but to catch the significant elements in the great melee of contemporary events is true genius; and that is what the author has done.

The whole book deals with happenings at the grass-roots, but the last chapters are those which show the full effectiveness of action at those same grass-roots by men and women who were able to read the signs of events and to visualize an economy which fits itself to natural surroundings.

Historically, it points out that the stakes are always great and that the chances of winning or losing are always paramount in the actions of people. It shows the winning

of fortunes to be predicated first on a good guess as to the value of the resource, and then upon the weather. Bad weather ended the great cattle boom with the winter of 1886. Good weather brought on the great homestead era and again put the final touch to an economic cycle which ended with the drought of the 1930's.

The author also makes it clear that in an area where nature and fortune roll fast there develops a crucible for the testing of social adjustments. It was Montana that gave the clue in the early twenties as to what was to follow in the next twenty years. Garet Garrett said that the economic distress might spread to the whole nation. So it is that grass-roots planning in Teton County, the organization of a grazing district on Pumpkin Creek, and the Malta plan of settlement may presage the future.

The history of Butte—although being somewhat beside the general theme—emphasizes the recklessness which goes with the exploiting of rich resources. This recklessness was duplicated in the free grass and in the cattle baron, and again in the free land and the homesteader. The former was a gamble on the part of a few men with great financial backing; the latter was a much greater gamble with the lives and fortunes of tens of thousands of families.

Great conflicts in point of view are illustrated in the contrast between Major Powell in his report in 1878 and Jim Hill in his speech at Havre in 1912. These contrasts can be duplicated a thousand times on a smaller scale throughout Great Plains history. Climate sometimes plays on the side of one; sometimes on the side of the other.

All of the exciting history has its culmination in references to the inventive genius of men like Clarkson, Hall, Wilson and Lantz—a genius which needs just as forceful portrayal as does the cunning and dash of Butte's copper kings. Some groups of people in recent years have acted just as boldly and courageously as the Vigilantes or the Rangers. Their resourcefulness has been pitted against the forces of nature, and they are undertaking to construct a defense of depth against these forces.

The meeting of the local ranchers at Beebe—an inland town with not even a water tank, but where the first grazing associ-

ation was developed—is just as important as was the meeting of the early legislators at Virginia City; the reconstruction of the agricultural resources at Malta is as important as is the building of a railway; and opinions expressed by participants in a Te-ton meeting are as important as the speech

of a national figure. The author does well to catch these extremely significant events so soon.

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